Connecting via Winsock to STN

Welcome to STN International!  Enter x:x

LOGINID:SSPTAJRK1626

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * *  Welcome to STN International  * * * * * * * * * *

| | | |
|---|---|---|
| NEWS 1 | | Web Page for STN Seminar Schedule - N. America |
| NEWS 2 | DEC 01 | ChemPort single article sales feature unavailable |
| NEWS 3 | APR 03 | CAS coverage of exemplified prophetic substances enhanced |
| NEWS 4 | APR 07 | STN is raising the limits on saved answers |
| NEWS 5 | APR 24 | CA/CAplus now has more comprehensive patent assignee information |
| NEWS 6 | APR 26 | USPATFULL and USPAT2 enhanced with patent assignment/reassignment information |
| NEWS 7 | APR 28 | CAS patent authority coverage expanded |
| NEWS 8 | APR 28 | ENCOMPLIT/ENCOMPLIT2 search fields enhanced |
| NEWS 9 | APR 28 | Limits doubled for structure searching in CAS REGISTRY |
| NEWS 10 | MAY 08 | STN Express, Version 8.4, now available |
| NEWS 11 | MAY 11 | STN on the Web enhanced |
| NEWS 12 | MAY 11 | BEILSTEIN substance information now available on STN Easy |
| NEWS 13 | MAY 14 | DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format |
| NEWS 14 | MAY 15 | INPADOCDB and INPAFAMDB enhanced with Chinese legal status data |
| NEWS 15 | MAY 28 | CAS databases on STN enhanced with NANO super role in records back to 1992 |
| NEWS 16 | JUN 01 | CAS REGISTRY Source of Registration (SR) searching enhanced on STN |
| NEWS 17 | JUN 26 | NUTRACEUT and PHARMAML no longer updated |
| NEWS 18 | JUN 29 | IMSCOPROFILE now reloaded monthly |
| NEWS 19 | JUN 29 | EPFULL adds SLART to AB, MCLM, and TI fields |
| NEWS EXPRESS | MAY 26 09 | CURRENT WINDOWS VERSION IS V8.4, AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009. |
| NEWS HOURS | | STN Operating Hours Plus Help Desk Availability |
| NEWS LOGIN | | Welcome Banner and News Items |

Enter NEWS followed by the item number or name to see news on that specific topic.

* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:34:05 ON 29 JUN 2009

=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.22 | 0.22 |

FILE 'REGISTRY' ENTERED AT 17:34:14 ON 29 JUN 2009


Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 28 JUN 2009 HIGHEST RN 1160218-33-6
DICTIONARY FILE UPDATES: 28 JUN 2009 HIGHEST RN 1160218-33-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

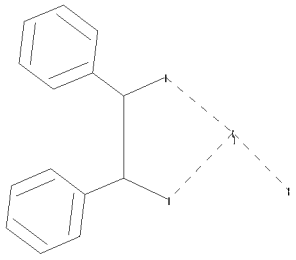
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

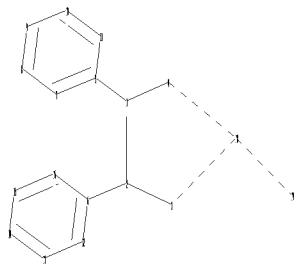
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10594744\Struc 2.str





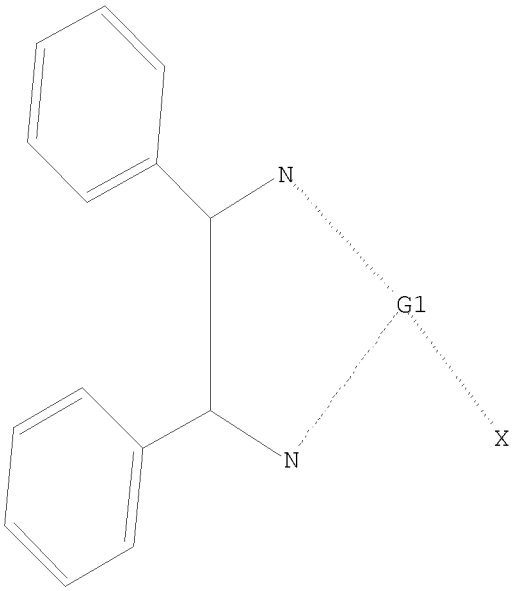
chain nodes :
19
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18
chain bonds :
1-5 2-6 18-19
ring bonds :
1-2 1-4 2-3 3-18 4-18 5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13
13-14 14-15 15-16
exact/norm bonds :
1-2 1-4 1-5 2-3 2-6 3-18 4-18 18-19
normalized bonds :
5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13 13-14 14-15 15-16

G1:Ir,Rh,Ru

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 18:Atom 19:CLASS

L1 STRUCTURE UPLOADED

=> d
L1 HAS NO ANSWERS
L1 STR




G1 Ir,Rh,Ru

Structure attributes must be viewed using STN Express query preparation.

=> l1
SAMPLE SEARCH INITIATED 17:34:40 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 112 TO ITERATE

100.0% PROCESSED 112 ITERATIONS 23 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 1606 TO 2874
PROJECTED ANSWERS: 173 TO 747

L2 23 SEA SSS SAM L1

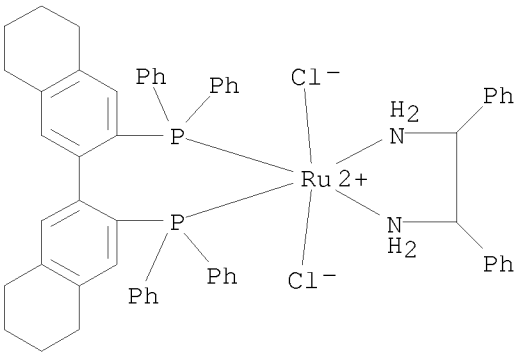
=> l1 full
FULL SEARCH INITIATED 17:34:45 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 2455 TO ITERATE

100.0% PROCESSED 2455 ITERATIONS 461 ANSWERS
SEARCH TIME: 00.00.01

L3 461 SEA SSS FUL L1

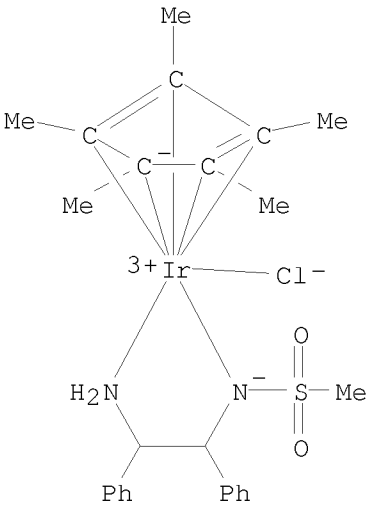
=> d scan

L3 461 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
MF C58 H56 Cl2 N2 P2 Ru
CI CCS



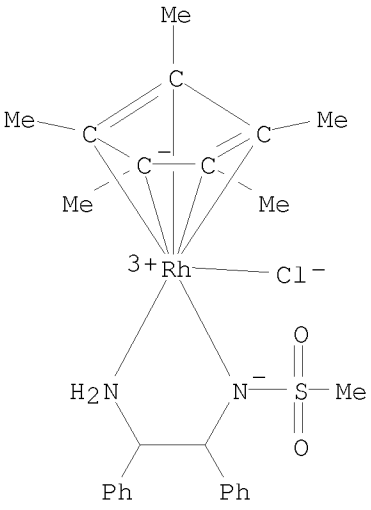

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 461 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Iridium, [N-[(1S,2S)-2-(amino-κN)-1,2-diphenylethyl]methanesulfonamidato-κN]chloro[(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-, stereoisomer
MF C25 H32 Cl Ir N2 O2 S
CI CCS



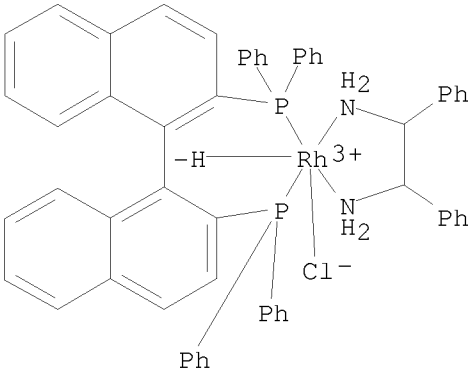
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3  461 ANSWERS  REGISTRY  COPYRIGHT 2009 ACS on STN
IN  Rhodium, [N-[(1S,2S)-2-(amino-κN)-1,2-diphenylethyl]methanesulfonamidato-κN]chloro[(1,2,3,4,5-η)-1,2,3,4,5-pentamethyl-2,4-cyclopentadien-1-yl]-
MF  C25 H32 Cl N2 O2 Rh S
CI  CCS



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

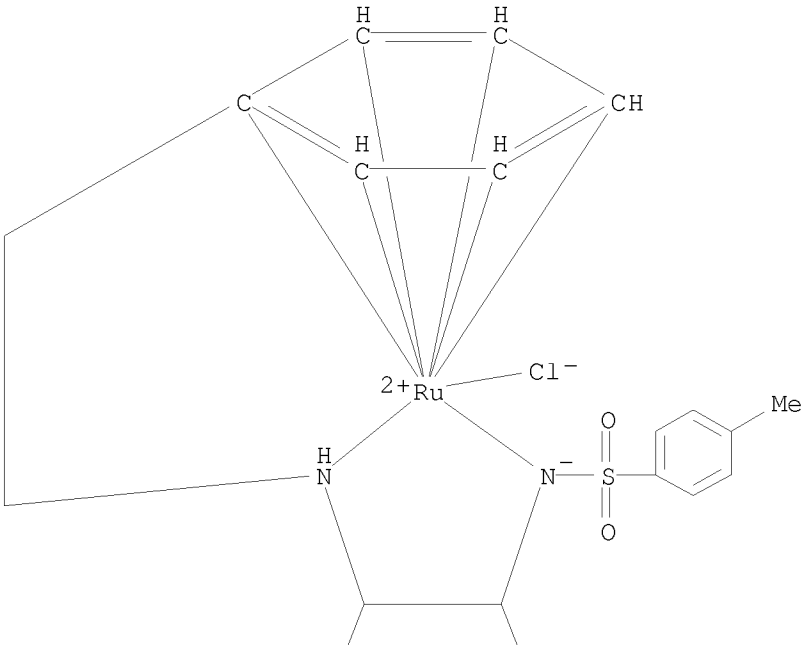
L3 461 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Rhodium(1+), [1,1'-(1R)-[1,1'-binaphthalene]-2,2'-diylbis[1,1-diphenylphosphine-κP]]chloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]hydro-, (OC-6-43)-
MF C58 H49 Cl N2 P2 Rh
CI CCS, COM




HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 461 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Ruthenium, chloro[N-[(1R,2R)-1,2-diphenyl-2-[[2-(η6-phenyl)ethyl]amino-κN]ethyl]-4-methylbenzenesulfonamidato-κN]-
MF C29 H29 Cl N2 O2 Ru S
CI CCS

PAGE 1-A

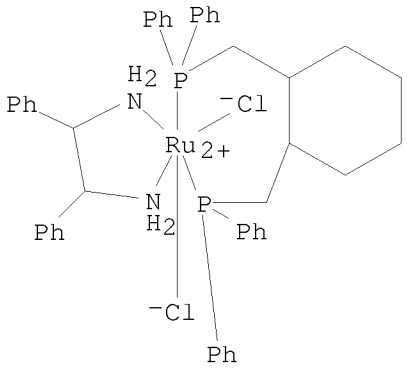



PAGE 2-A


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L3 461 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Ruthenium, dichloro[1,1'-[(1S,2S)-1,2-cyclohexanediylbis(methylene)]bis[1,1-diphenylphosphine-κP]][(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-32)-
MF C46 H50 Cl2 N2 P2 Ru
CI CCS




**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> file caplus

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 186.36 | 186.58 |

FILE 'CAPLUS' ENTERED AT 17:35:42 ON 29 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.


FILE COVERS 1907 - 29 Jun 2009 VOL 151 ISS 1
FILE LAST UPDATED: 28 Jun 2009 (20090628/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Apr 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2009

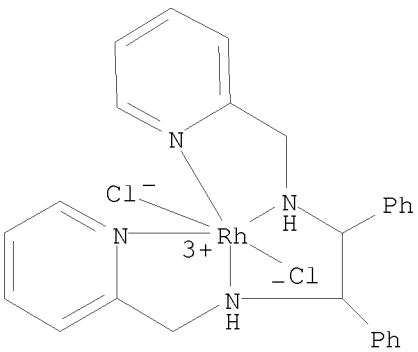
CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2009.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

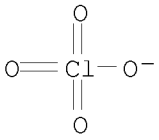
This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> l3
L4          337 L3

=> d ibib abs hitstr 337

L4   ANSWER 337 OF 337  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         1988:642931  CAPLUS
DOCUMENT NUMBER:          109:242931
ORIGINAL REFERENCE NO.:   109:39991a,39994a
TITLE:                    Chiral metal complexes. 26. Metal complexes of the new
                          stereospecific tetraamine ligand 3R,4R- and
                          3S,4S-diphenyl-1,6-di(2-pyridyl)-2,5-diazahexane
AUTHOR(S):                Fenton, Ronald R.; Vagg, Robert S.; Williams, Peter A.
CORPORATE SOURCE:         Sch. Chem., Macquarie Univ., 2109, Australia
SOURCE:                   Inorganica Chimica Acta (1988), 148(1), 37-44
                          CODEN: ICHAA3; ISSN: 0020-1693
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   (RCH2NHCHPh)2 (R = 2-pyridyl) (picstien), based on stilbenediamine, was
     prepared in its racemic and enantiomeric forms.  R,R-Picstien coordinates to
     Co(III) to give Λ-β-[Co(R,R-picstien)Cl2]X.H2O (X = Cl, ClO4)
     stereospecifically; the complexes were characterized by NMR and
     chiroptical properties.  The chloride donors in this cation undergo
     substitution by NO2- or C2O42- with full retention of its Λ-β
     topol.  A Rh(III) analog of the dichloro complex also was isolated, and
     this has the same stereochem.  The S,S antipode of the ligand was used to
     generate corresponding enantiomeric chelate forms.
IT   117802-85-4P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation and NMR and CD of)
RN   117802-85-4  CAPLUS
CN   Rhodium(1+), dichloro[1,2-diphenyl-N,N'-bis(2-pyridinylmethyl)-1,2-
     ethanediamine-N,N',N'',N''']-, stereoisomer, perchlorate (9CI)  (CA INDEX
     NAME)

     CM   1

     CRN  117802-84-3
     CMF  C26 H26 Cl2 N4 Rh
     CCI  CCS
```



CM 2

CRN 14797-73-0
CMF Cl O4



=> file reg

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 6.64 | 193.22 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -0.82 | -0.82 |

FILE 'REGISTRY' ENTERED AT 17:36:49 ON 29 JUN 2009


Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 28 JUN 2009 HIGHEST RN 1160218-33-6
DICTIONARY FILE UPDATES: 28 JUN 2009 HIGHEST RN 1160218-33-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

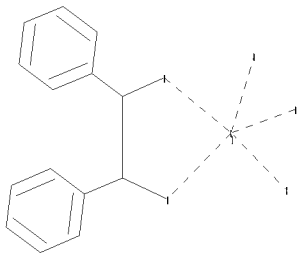
TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

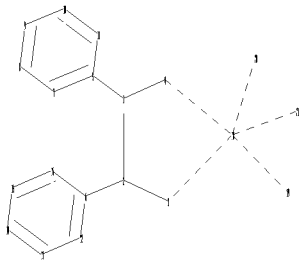
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\Stnexp\Queries\10594744\Struc 3.str

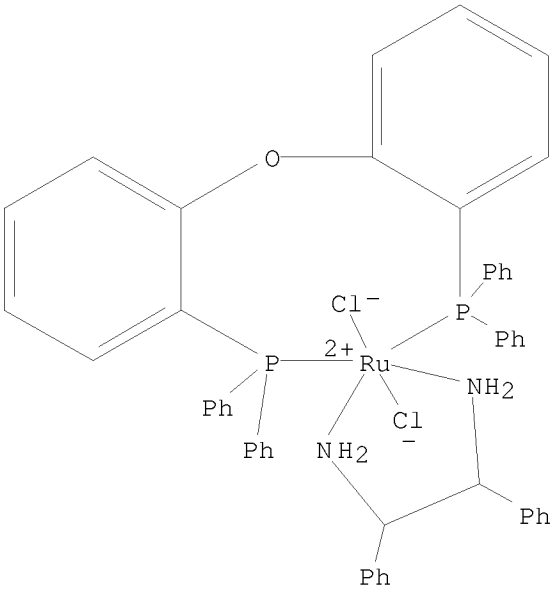




chain nodes :
19 20 21
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18
chain bonds :
1-5 2-6 18-19 18-20 18-21
ring bonds :
1-2 1-4 2-3 3-18 4-18 5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13
13-14 14-15 15-16
exact/norm bonds :
1-2 1-4 1-5 2-3 2-6 3-18 4-18 18-19 18-20 18-21
normalized bonds :
5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13 13-14 14-15 15-16

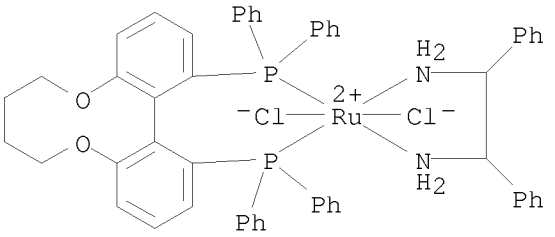
G1:Ir,Rh,Ru

```
Match level :
1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:Atom  8:Atom  9:Atom  10:Atom
11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  18:Atom  19:CLASS  20:CLASS
21:CLASS



L5      STRUCTURE UPLOADED

=> s l5 sub=l3 sss sam
SAMPLE SUBSET SEARCH INITIATED 17:38:05 FILE 'REGISTRY'
SAMPLE SUBSET SCREEN SEARCH COMPLETED -       23 TO ITERATE

100.0% PROCESSED       23 ITERATIONS                              3 ANSWERS
SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET):           ONLINE  **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET):          173 TO      747
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET):               3 TO      163

L6             3 SEA SUB=L3 SSS SAM L5

=> s l5 sub=l3 sss full
FULL SUBSET SEARCH INITIATED 17:38:13 FILE 'REGISTRY'
FULL SUBSET SCREEN SEARCH COMPLETED -      460 TO ITERATE

100.0% PROCESSED      460 ITERATIONS                             30 ANSWERS
SEARCH TIME: 00.00.01

L7            30 SEA SUB=L3 SSS FUL L5

=> l3 not l7
L8          431 L3 NOT L7

=> d scan

L8   431 ANSWERS   REGISTRY  COPYRIGHT 2009 ACS on STN
IN   Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-
     κN1,κN2][1,1'-(oxydi-2,1-phenylene)bis[1,1-diphenylphosphine-
     κP]]-, (OC-6-13)-
MF   C50 H44 Cl2 N2 O P2 Ru
CI   CCS
```



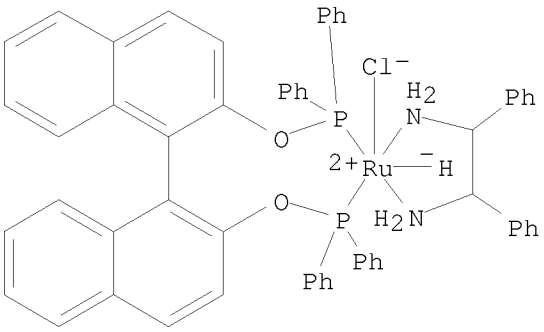
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L8 431 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Ruthenium, dichloro(1,2-diphenyl-1,2-ethanediamine-κN1,κN2)[1,1'-[(14aR)-6,7,8,9-tetrahydrodibenzo[b,d][1,6]dioxecin-1,14-diyl]bis[1,1-diphenylphosphine-κP]]-, (OC-6-13)-
MF C54 H50 Cl2 N2 O2 P2 Ru
CI CCS



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

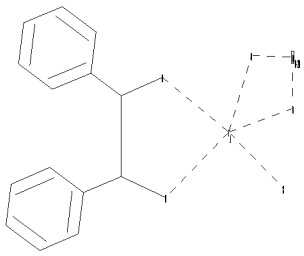
L8 431 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Ruthenium, [(1R)-[1,1'-binaphthalene]-2,2'-diyl bis(diphenylphosphinite-κP)]chloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']hydro-, (OC-6-43)- (9CI)
MF C58 H49 Cl N2 O2 P2 Ru
CI CCS

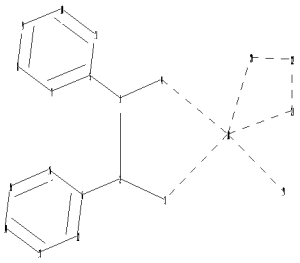



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=>
Uploading C:\Program Files\Stnexp\Queries\10594744\Struc 4.str





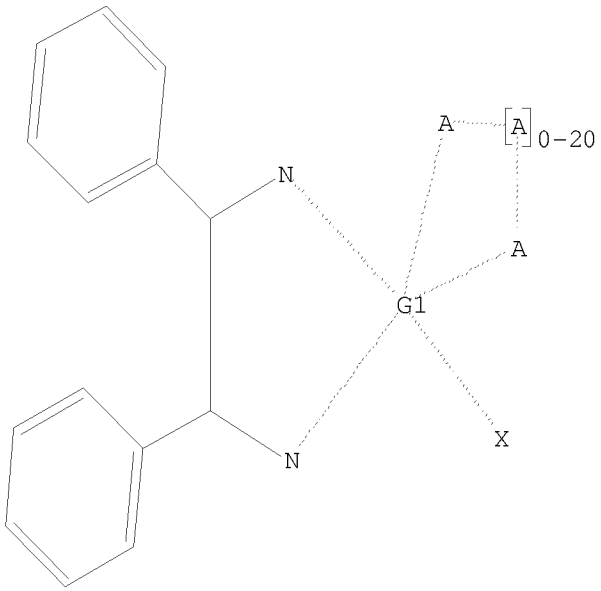
chain nodes :
19
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 20 21 22
chain bonds :
1-5 2-6 18-19
ring bonds :
1-2 1-4 2-3 3-18 4-18 5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13
13-14 14-15 15-16 18-20 18-21 20-22 21-22
exact/norm bonds :
1-2 1-4 1-5 2-3 2-6 3-18 4-18 18-19 18-20 18-21 20-22 21-22
normalized bonds :
5-7 5-11 6-12 6-16 7-8 8-9 9-10 10-11 12-13 13-14 14-15 15-16

G1:Ir,Rh,Ru

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 18:Atom 19:CLASS 20:CLASS
21:CLASS 22:Atom

L9 STRUCTURE UPLOADED

=> d
L9 HAS NO ANSWERS
L9 STR




G1 Ir,Rh,Ru

Structure attributes must be viewed using STN Express query preparation.

=> s l9 sub=l3 sss sam
SAMPLE SUBSET SEARCH INITIATED 17:40:59 FILE 'REGISTRY'
SAMPLE SUBSET SCREEN SEARCH COMPLETED - 23 TO ITERATE

100.0% PROCESSED 23 ITERATIONS 19 ANSWERS
SEARCH TIME: 00.00.01

PROJECTIONS (WITHIN SPECIFIED SUBSET): ONLINE **COMPLETE**
PROJECTED ITERATIONS (WITHIN SPECIFIED SUBSET): 173 TO 747
PROJECTED ANSWERS (WITHIN SPECIFIED SUBSET): 119 TO 641

L10 19 SEA SUB=L3 SSS SAM L9

=> s l9 sub=l3 sss full
FULL SUBSET SEARCH INITIATED 17:41:08 FILE 'REGISTRY'

FULL SUBSET SCREEN SEARCH COMPLETED - 461 TO ITERATE

100.0% PROCESSED 461 ITERATIONS 399 ANSWERS
SEARCH TIME: 00.00.01

L11 399 SEA SUB=L3 SSS FUL L9

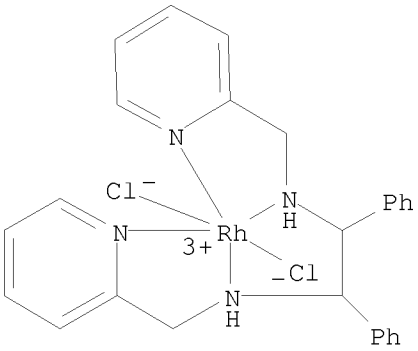
=> l11 not l3
L12 0 L11 NOT L3

=> l3 not l11
L13 62 L3 NOT L11

=> d scan

L13 62 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Rhodium(1+), dichloro[1,2-diphenyl-N,N'-bis(2-pyridinylmethyl)-1,2-ethanediamine-N,N',N'',N''']-, stereoisomer, perchlorate (9CI)
MF C26 H26 Cl2 N4 Rh . Cl O4

CM 1

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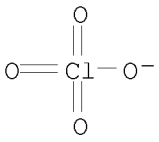
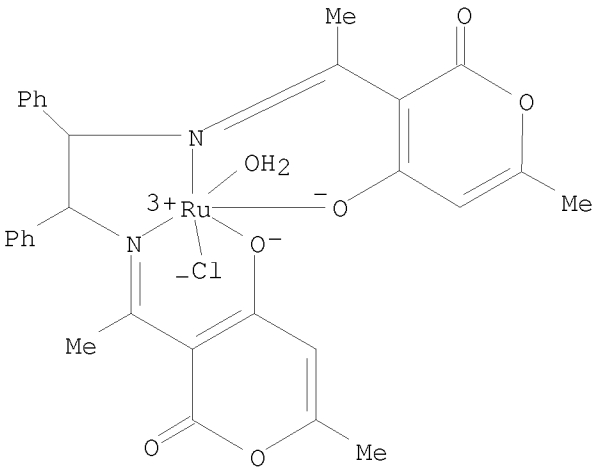



HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L13 62 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Ruthenium, aquachloro[[3,3'-[(1,2-diphenyl-1,2-ethanediyl)bis[(nitrilo-κN)ethylidyne]]bis[4-(hydroxy-κO)-6-methyl-2H-pyran-2-onato]](2-)]-, [OC-6-34-[S-(R*,R*)]]- (9CI)
MF C30 H28 Cl N2 O7 Ru
CI CCS




HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 91.84 | 285.06 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
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USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Apr 2009

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reclassification data for the second quarter of 2009.

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http://www.cas.org/legal/infopolicy.html

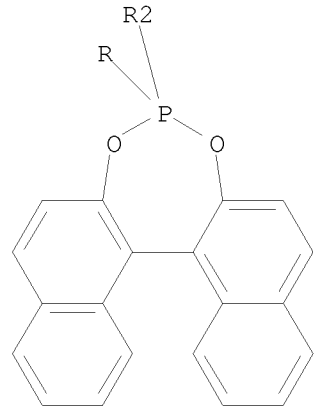
This file contains CAS Registry Numbers for easy and accurate substance identification.

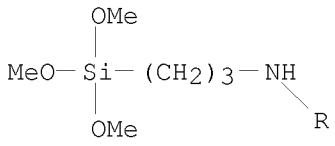
=> l13
L14 42 L13

=> d ibib abs hitstr 1-42

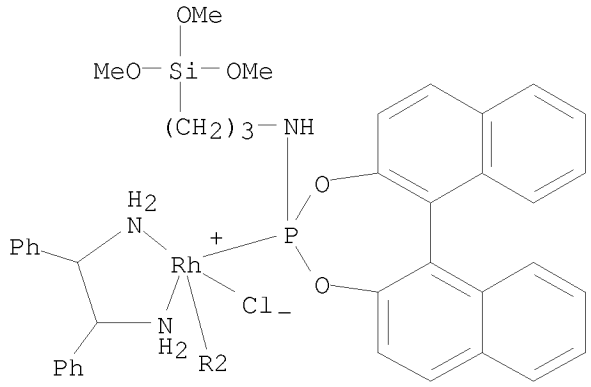
L14 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:322536 CAPLUS
DOCUMENT NUMBER: 150:539377
TITLE: Mesoporous SBA-15-supported chiral catalysts: Preparation, characterization and asymmetric catalysis
AUTHOR(S): Liu, Guohua; Liu, Mouming; Sun, Yunqiang; Wang, Jianyao; Sun, Chuanshou; Li, Hexing
CORPORATE SOURCE: Department of Chemistry, College of Life and Environmental Science, Shanghai Normal University, Shanghai, 200234, Peop. Rep. China
SOURCE: Tetrahedron: Asymmetry (2009), 20(2), 240-246
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Two mesoporous silica-supported chiral Rh and Ru catalysts with ordered two-dimensional hexagonal mesostructures were prepared by directly post grafting organometallic complexes RhCl[(R)-MonoPhos(CH2)3Si(OMe)3][(R,R)-DPEN] and RuCl2[(R)-MonoPhos(CH2)3Si(OMe)3][(R,R)-DPEN] (DPEN = 1,2-diphenylethylenediamine) on SBA-15. During the asym. hydrogenation of various aromatic ketones under 40 atm H2, both catalysts exhibited high catalytic activities (> 97% conversions) and moderate enantioselectivities (33-54% ee). Furthermore, the chiral Rh catalyst could be easily recovered and used repetitively five times without significantly affecting its catalytic activity and enantioselectivity. A catalytic comparison of the mesoporous silica-supported chiral Rh catalyst prepared by a post modification method is also discussed.
IT 1152161-66-4DP, silica-supported 1152161-67-5DP, silica-supported
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective hydrogenation of acetopheones on silica-supported chiral ruthenium and rhodium catalysts)
RN 1152161-66-4 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A



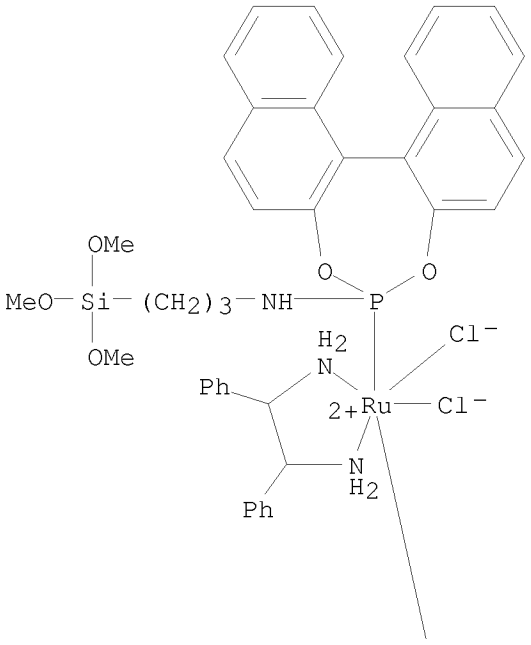


PAGE 2-A



RN 1152161-67-5 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A

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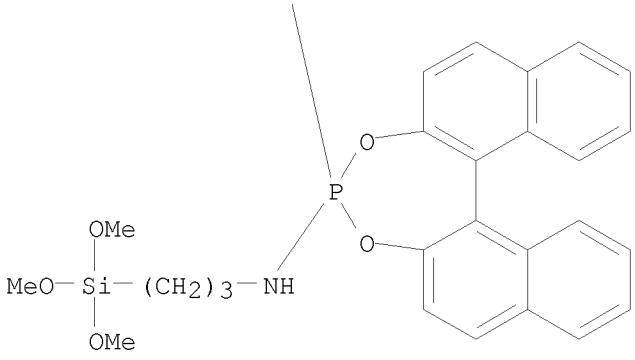



REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:1117981 CAPLUS
DOCUMENT NUMBER: 149:378379
TITLE: Process for preparation of alcohols via hydrogenation of esters or lactones in the presence of a ruthenium phosphine amine catalyst.
INVENTOR(S): Ino, Yasunori; Yoshida, Akifumi; Kuriyama, Wataru
PATENT ASSIGNEE(S): Takasago International Corporation, Japan

SOURCE: Eur. Pat. Appl., 26pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

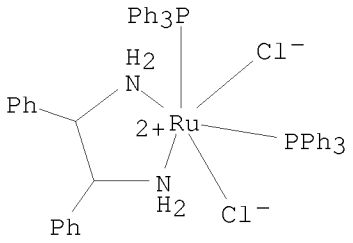
| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 1970360 | A1 | 20080917 | EP 2008-152538 | 20080310 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS | | | | |
| JP 2009096752 | A | 20090507 | JP 2007-269229 | 20071016 |
| JP 2008260758 | A | 20081030 | JP 2008-55738 | 20080306 |
| US 20080228012 | A1 | 20080918 | US 2008-76150 | 20080314 |
| JP 2009001545 | A | 20090108 | JP 2008-114075 | 20080424 |

PRIORITY APPLN. INFO.: JP 2007-69201 A 20070316
JP 2007-134905 A 20070522
JP 2007-269229 A 20071016
OTHER SOURCE(S): MARPAT 149:378379

AB A method for producing alcs. comprises reducing esters or lactones with H2 gas in the presence of a catalyst comprising a ruthenium compound, a monodentate monophosphine or a bidentate bisphosphine, and an amine. The catalyst may be of the formula: RuX1X2(Lp)m(Lq)n [X1, X2 = anionic ligand; L = phosphine ligand; m = 1 when L is bidentate, while m = 2 when L is monodentate; Lq = amine ligand; n = 1 when L is bidentate, while n = 2 when L is monodentate]. Thus, phthalide was hydrogenated in the presence of RuCl2(dppp)(en) [dppp = 1,3-bis(diphenylphosphino)propane, en = ethylenediamine] and NaOMe in THF and 5 MPa at 100° for 18 h to give 99.5% conversion to 1,2-benzenedimethanol in >99% selectivity.

IT 886446-25-9P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of alcs. via hydrogenation of esters or lactones in the presence of a ruthenium phosphine amine catalyst)

RN 886446-25-9 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



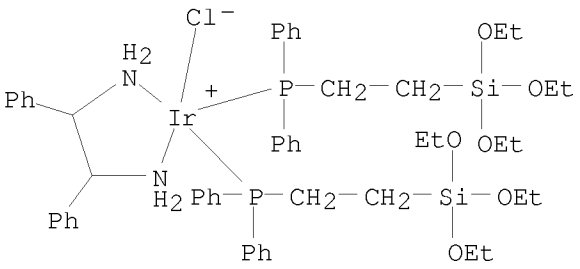

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:866051 CAPLUS

DOCUMENT NUMBER: 150:351683
TITLE: Enantioselective hydrogenation of aromatic ketones catalyzed by a mesoporous silica-supported iridium catalyst
AUTHOR(S): Liu, Guohua; Yao, Mei; Wang, Jianyao; Lu, Xiaoquan; Liu, Mouming; Zhang, Fang; Li, Hexing
CORPORATE SOURCE: Department of Chemistry, Shanghai Normal University, Shanghai, 200234, Peop. Rep. China
SOURCE: Advanced Synthesis & Catalysis (2008), 350(10), 1464-1468
CODEN: ASCAF7; ISSN: 1615-4150
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A mesoporous, silica-supported, chiral iridium catalyst with a highly ordered dimensional-hexagonal mesostructure was prepared by postgrafting the organometallic complex (1-diphenylphosphino-2-triethylsilylethane)[(R,R)-1,2-diphenylethylenediamine]iridium chloride {IrCl[PPh2(CH2)2Si(OEt)3]2[(R,R)-DPEN] (DPEN = 1,2-diphenylethylenediamine)} on SBA-15 silica. During the asym. hydrogenation of various aromatic ketones under 40 atm of hydrogen, the mesoporous, silica-supported, chiral iridium catalyst exhibited high catalytic activity (> 95% conversions) and excellent enantioselectivity (≥ 99% ee). The catalyst could be recovered easily and used repetitively seven times without significantly affecting the catalytic activity and the enantioselectivity.

IT 1133881-42-1DP, SBA-15-supported
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(enantioselective hydrogenation of aromatic ketones catalyzed by a mesoporous silica-supported iridium catalyst)
RN 1133881-42-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(enantioselective hydrogenation of arom. ketones catalyzed by a mesoporous silica-supported iridium catalyst
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:674920 CAPLUS
DOCUMENT NUMBER: 149:32089
TITLE: Hydrogenation of esters with ru/bidentate ligands

complexes
INVENTOR(S): Saudan, Lionel; Saudan, Christophe
PATENT ASSIGNEE(S): Firmenich SA, Switz.
SOURCE: PCT Int. Appl., 34pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2008065588 | A1 | 20080605 | WO 2007-IB54746 | 20071122 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| IN 2009KN01588 | A | 20090529 | IN 2009-KN1588 | 20090428 |

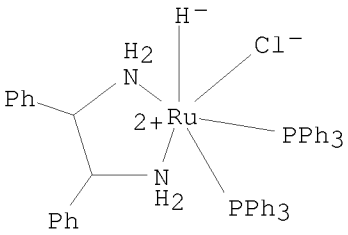
PRIORITY APPLN. INFO.: WO 2006-IB54449 A 20061127
WO 2007-IB54746 W 20071122

OTHER SOURCE(S): MARPAT 149:32089

AB The present invention relates to processes for the reduction by hydrogenation, using mol. H2, of a substrate containing one or two esters, or lactones, functional groups into the corresponding alc., or diol, said process is carried out in the presence of a base and at least one catalyst or pre-catalyst in the form of a ruthenium complex, [Ru(PP)(NN)S2-nYn]Y2-n [wherein PP = a C6-60-diphosphine bidentate ligand (coordinated via two phosphine groups); NN = a C3-40-bidentate ligand (coordinated through two amino groups and whereby at least one amine group is a primary amine); S = neutral C1-26-neutral monodentate ligand; Y = H, halogen, BH4, AlH4, OH, C1-6-alkoxy, carboxyl radical; n = 0, 1, 2] comprising at least one substituted α-carbon and one primary amine as one of the coordinating atoms. Thus, PhCO2Me was hydrogenated over [RuCl2{(R)-BINAP}{(S,S)-DPEN}] in THF containing NaOMe to give 77% PhCH2OH.

IT 1030633-32-9
RL: CAT (Catalyst use); USES (Uses)
(hydrogenolysis catalyst; hydrogenation of esters and lactones with ruthenium bidentate ligands complexes)

RN 1030633-32-9 CAPLUS
CN Ruthenium, chloro(1,2-diphenyl-1,2-ethanediamine-κN1,κN2)hydrobis(triphenylphosphine)- (CA INDEX NAME)



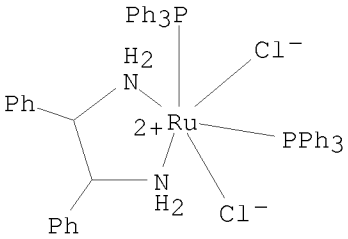
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:587307 CAPLUS
DOCUMENT NUMBER: 150:329267
TITLE: Asymmetric hydrogenation of acetophenone catalyzed by chiral Ru complex in mesoporous material supported ionic liquid
AUTHOR(S): Lou, Lan-Lan; Peng, Xiaojie; Yu, Kai; Liu, Shuangxi
CORPORATE SOURCE: Institute of New Catalytic Materials Science, College of Chemistry, Nankai University, Tianjin, 300071, Peop. Rep. China
SOURCE: Catalysis Communications (2008), 9(9), 1891-1893
CODEN: CCAOAC; ISSN: 1566-7367
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 150:329267

AB The chiral Ru complex was successfully immobilized inside the channels of four kinds of mesoporous materials with a method based on supported ionic liquid system. The prepared heterogeneous catalysts exhibited high activity and enantioselectivity in the asym. hydrogenation of acetophenone. Furthermore, these catalysts were stable and could be recycled at least four times without noticeable decrease in catalytic activity. And the SiO2-supported catalyst exhibited the best stability.

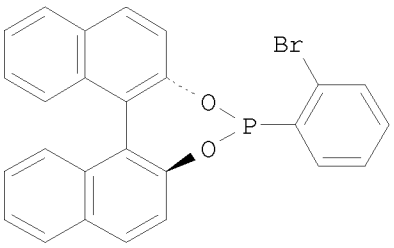
IT 320338-32-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(asym. hydrogenation of acetophenone catalyzed by chiral Ru complex in mesoporous material supported ionic liquid)

RN 320338-32-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:66050 CAPLUS
DOCUMENT NUMBER: 150:97626
TITLE: The synthesis and application of BrXuPHOS: a novel monodentate phosphorus ligand for the asymmetric hydrogenation of ketones
AUTHOR(S): Wills, Martin; Xu, Yingjian; Docherty, Gordon; Woodward, Gary
CORPORATE SOURCE: Department of Chemistry, The University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Catalysts for Fine Chemical Synthesis (2007), Volume 5, 116-121. Editor(s): Roberts, Stanley M.; Whittall, John. John Wiley & Sons Ltd.: Chichester, UK. CODEN: 69KIGF
DOCUMENT TYPE: Conference
LANGUAGE: English
OTHER SOURCE(S): CASREACT 150:97626
GI




I

AB The use of the monodentate phosphorus ligand BrXuPHOS I in a ruthenium complex furnishes a catalyst for the asym. hydrogenation of simple ketones.
IT 798560-99-3P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of monodentate phosphorus ligand BrXuPHOS and use in Ru-catalyzed asym. hydrogenation of ketones)
RN 798560-99-3 CAPLUS
CN Ruthenium, bis[(11bS)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-13)- (CA INDEX NAME)

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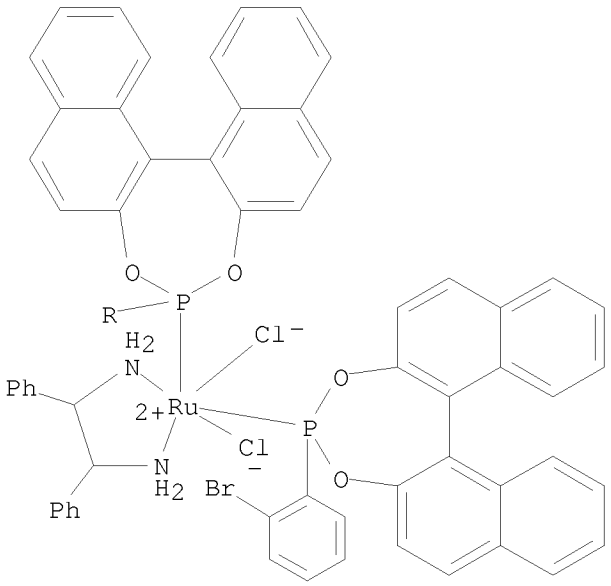


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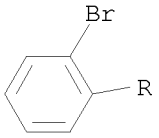



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

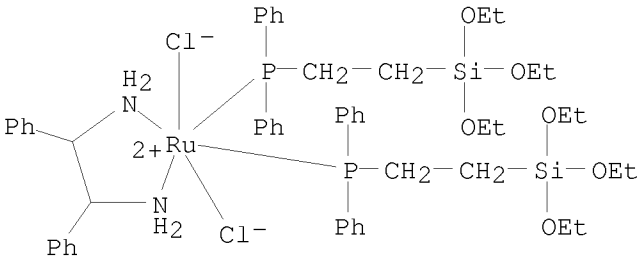
L14 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2008:22564 CAPLUS
DOCUMENT NUMBER: 148:284833
TITLE: Facile synthesis of a mesoporous silica-supported catalyst for Ru-catalyzed transfer hydrogenation of ketones
AUTHOR(S): Liu, Guohua; Yao, Mei; Zhang, Fang; Gao, Yan; Li, Hexing
CORPORATE SOURCE: Department of Chemistry, College of Life and Environmental Science, Shanghai Normal University, Shanghai, Peop. Rep. China
SOURCE: Chemical Communications (Cambridge, United Kingdom) (2008), (3), 347-349
CODEN: CHCOFS; ISSN: 1359-7345
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 148:284833

AB A convenient method for preparation of a mesoporous silica-supported chiral catalyst by postgrafting a homogeneous catalyst on SBA-15 was developed and its application in the asym. transfer hydrogenation of aromatic ketones was investigated.

IT 1008530-86-6DP, silica-supported
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of a mesoporous silica-supported catalyst for Ru-catalyzed transfer hydrogenation of ketones)

RN 1008530-86-6 CAPLUS

CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]bis[diphenyl[2-(triethoxysilyl)ethyl]phosphine-κP]-, (OC-6-13)- (CA INDEX NAME)



RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of a mesoporous silica-supported catalyst for Ru-catalyzed transfer hydrogenation of ketones

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:362182 CAPLUS
DOCUMENT NUMBER: 147:95222
TITLE: Structural studies on ruthenium(II) complexes used in interphase catalysis for the hydrogenation of ketones
AUTHOR(S): Krishnan, Venkata; Bertagnolli, Helmut
CORPORATE SOURCE: Institute of Physical Chemistry, University of Stuttgart, Stuttgart, 70569, Germany
SOURCE: Applied Organometallic Chemistry (2007), 21(3), 161-171
CODEN: AOCHEX; ISSN: 0268-2605
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

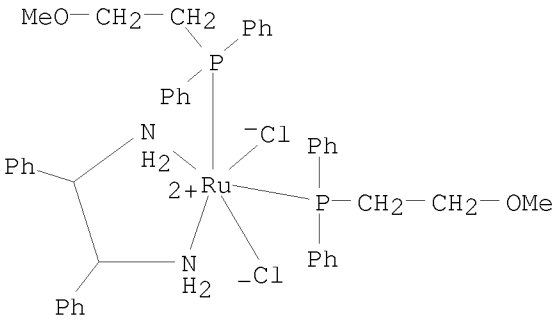
AB Structural studies were performed on catalytically active ruthenium(II) complexes used in interphases, by means of XAFS spectroscopy. The EXAFS investigations indicate that the complexes retain their structural integrity when they are embedded on polysiloxane matrixes to form stationary phase materials. The AXAFS studies reveal that the variations in the catalytic activity of the complexes with different ligands can be correlated to the differences in the electronic structure around the active ruthenium center. The EXAFS investigations show that, in asym. transfer hydrogenation reactions catalyzed by ruthenium(II) complexes, the co-catalyst plays a crucial role not only in enhancing the catalytic

activity, but also in determining the structure of the intermediate species.

IT 942128-81-6
RL: CAT (Catalyst use); PRP (Properties); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(reaction with co-catalyst; EXAFS structural studies on ruthenium(II) complexes used in interphase catalysis for the transfer hydrogenation of ketones)

RN 942128-81-6 CAPLUS

CN Ruthenium, dichloro(1,2-diphenyl-1,2-ethanediamine-κN1,κN2)bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (CA INDEX NAME)



REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2007:122373 CAPLUS

DOCUMENT NUMBER: 147:521925

TITLE: Asymmetric hydrogenation of 2-acetylnaphthalene catalyzed by RuCl2[P(C6H5)3]2-(R,R)-DPEN

AUTHOR(S): Tao, Ming; Xiong, Wei; Chen, Hua; Li, Xianjun

CORPORATE SOURCE: Department of Biology and Chemistry, Xichang College, Xichang, Sichuan, 615022, Peop. Rep. China

SOURCE: Cuihua Xuebao (2006), 27(12), 1107-1110
CODEN: THHPD3; ISSN: 0253-9837

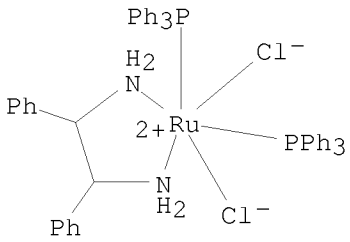
PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

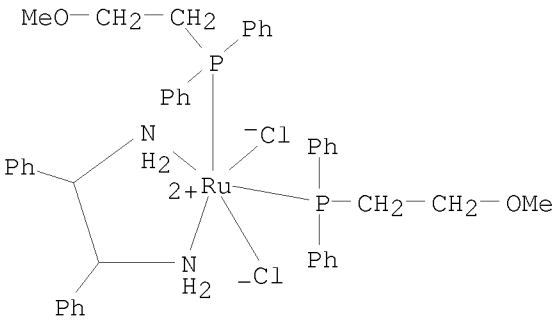
AB A novel ruthenium complex RuCl2[P(C6H5)3]2=(R,R)-DPEN [DPEN = 1,2-diphenylethylenediamine; dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)ruthenium] was synthesized and characterized by 1H and 31P NMR. The ruthenium complex was applied to the asym. hydrogenation of 2-acetylnaphthalene. The effects of reaction temperature, hydrogen pressure, and molar ratio of base to catalyst on the activity and enantioselectivity were investigated in an isopropanol solution of (CH3)3COK. The results showed that the increase in the temperature and pressure accelerated the reaction but slightly decreased the enantioselectivity for (S)-α-(2-naphthyl)ethanol [i.e., (αS)-α-methyl-2-naphthalenemethanol]. Under the conditions of acetylnaphthalene: (CH3)3COK:Ru = 50000:450:1 (molar ratio), 4 MPa, 25°, and 16 h, 83% ee and 100% yield of α-(2-naphthyl)ethanol were achieved.

IT 886446-25-9P, Dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)ruthenium
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of dichloro[(R,R)-diphenylethanediamine-κN,κN']bis(triphenylphosphine)ruthenium and study of its applicability as catalyst for stereoselective hydrogenation of acetylnaphthalene)
RN 886446-25-9 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)




L14 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:1277528 CAPLUS
DOCUMENT NUMBER: 147:397121
TITLE: Phosphorus-31 NMR and FAB-Mass spectroscopies to confirm synthesis of diamine(diphosphine)ruthenium(II) complexes starting from diamine(ether phosphine)ruthenium(II) complexes via phosphine ligands exchanged
AUTHOR(S): Warad, Ismail; Al-Resayes, Saud I.
CORPORATE SOURCE: Department of Chemistry, Girls College at Hawtat Sudayr, Saudi Arabia
SOURCE: Journal of Saudi Chemical Society (2006), 10(2), 285-294
CODEN: JSCSFO; ISSN: 1319-6103
PUBLISHER: Saudi Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 147:397121
AB The ligands exchange of the ether-phosphine (Ph2PCH2CH2OCH3) on the diamine(etherphosphine)ruthenium(II) with 1,3-bis(diphenylphosphino)propane as a bidentate chelate ligand successfully occurs to produce diamine[1,3-bis(diphenylphosphino)propane]ruthenium(II) complexes in a good yields under vigorous stirring for one week in an inert atmospheric using CH2Cl2 as solvent. Several ether-phosphine-RuCl2 complexes with different types of diamine were tested to confirm the substitution method. To collect more information about the system 31P{1H} NMR and 13C{1H} NMR as well as FAB-Mass spectroscopy were studied in parallel way to control and support the ligands exchange reaction processes.
IT 942128-81-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of diamine(diphosphine)ruthenium(II) complexes starting from

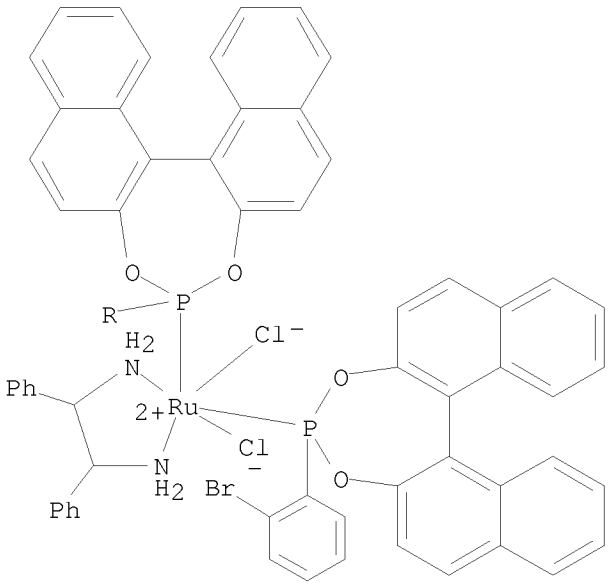
diamine(ether phosphine)ruthenium(II) complexes via phosphine ligand exchanged)
RN 942128-81-6 CAPLUS
CN Ruthenium, dichloro(1,2-diphenyl-1,2-ethanediamine-κN1,κN2)bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:1268224 CAPLUS
DOCUMENT NUMBER: 146:206056
TITLE: Ru(II) complexes of cyclohexanediamine and monodentate phosphorus ligands for asymmetric ketone hydrogenation
AUTHOR(S): Xu, Yingjian; Docherty, Gordon F.; Woodward, Gary; Wills, Martin
CORPORATE SOURCE: Asymmetric Catalysis Group, Department of Chemistry, Warwick University, Coventry, CV4 7AL, UK
SOURCE: Tetrahedron: Asymmetry (2006), 17(20), 2925-2929
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 146:206056
AB The incorporation of a trans-1,2-diaminocyclohexane in place of DPEN provides improvements in enantioselectivity to asym. ketone hydrogenation reactions using BrXuPHOS-Ru-diamine catalysts. Substrates containing halogenated aryl rings are particularly compatible with this catalyst, however, α-chlorinated ketones remain resistant to reduction under any conditions.
IT 798560-99-3
RL: CAT (Catalyst use); USES (Uses)
(Ru(II) complexes of cyclohexanediamine and monodentate phosphorus ligands for asym. ketone hydrogenation)
RN 798560-99-3 CAPLUS
CN Ruthenium, bis[(11bS)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-13)- (CA INDEX NAME)

PAGE 1-A



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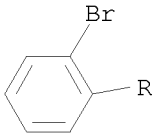


REFERENCE COUNT: 82 THERE ARE 82 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:606687 CAPLUS
DOCUMENT NUMBER: 145:83530
TITLE: Tetradentate ligands and metal complexes thereof for asymmetric catalysis
INVENTOR(S): Boaz, Neil Warren
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| US 20060135804 | A1 | 20060622 | US 2004-18287 | 20041221 |
| WO 2006068879 | A1 | 20060629 | WO 2005-US45031 | 20051212 |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: US 2004-18287 A 20041221

OTHER SOURCE(S): CASREACT 145:83530; MARPAT 145:83530

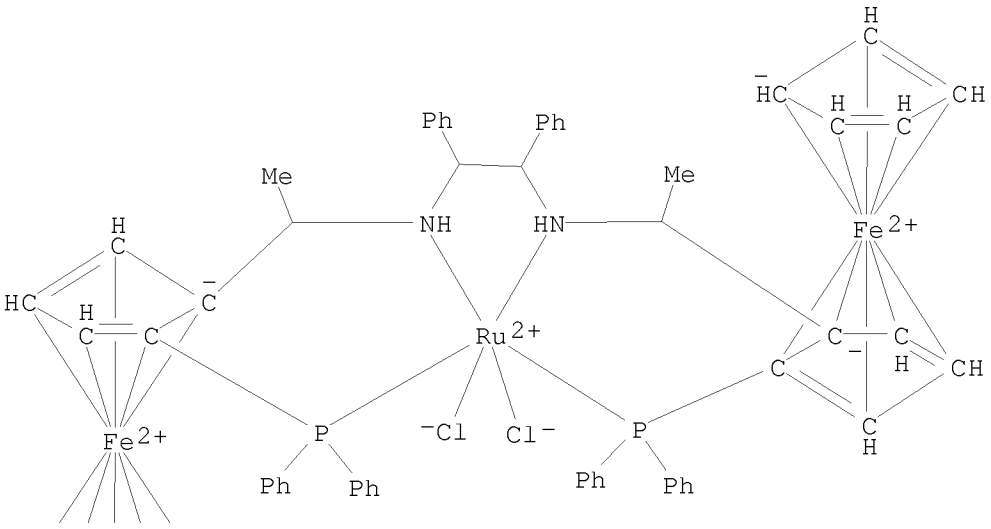
AB This invention relates to novel, substantially enantiomerically pure tetradentate ligands comprised of two phosphines and two secondary amines. These species have been used as ligands for metal catalysts for asym. reactions and have demonstrated good enantioselectivity, in particular as ruthenium complexes for asym. hydrogenation. Also disclosed are methods for making the ligands, corresponding catalyst complexes, and processes employing the ligands and catalysts. The ligands may be described by the general formula, R2P-L1-NH-L2-NH-L3-PR12 (R, R1 = independently branched or straight chain C1-20 alkyl, C3-8 cycloalkyl, C6-20 carbocyclic aryl, S, N, O containing C4-20 heteroaryl, etc.; L1, L2, L3 = enantiomerically pure same or different diradicals with branched or straight chain C1-20 alkyl, C3-8 cycloalkyl, C6-20 carbocyclic aryl, S, N, O containing C4-20 heteroaryl, metallocenylalkyl, etc.). Thus, reaction of N,N'-bis-[(R)-1[(S)-2-([3,5-dimethylphenyl]phosphino)ferrocenyl]ethyl] (S,S)-1,2-cyclohexyldiamine (preparation given) with p-cymene ruthenium dichloride dimer in DMF at 100° for 1h gave 38% title catalyst, N,N'-bis[(R)-1-[(S)-2-(bis[3,5-dimethylphenyl]phosphino)ferrocenyl]ethyl] (S,S)-1,2-cyclohexyldiamineruthenium(II) dichloride. Asym. hydrogenation of acetylferrocene using the prepared catalyst is also given.

IT 893444-79-6P 893444-83-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of tetradentate aminophosphinoferrocenyl ligands and their ruthenium complexes for asym. hydrogenation catalysis)

RN 893444-79-6 CAPLUS

CN Ruthenium, dichloro[(2S,2''S)-1,1''-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(imino-κN)-(1S)-ethylidene]]bis[2-(diphenylphosphino-κP)ferrocene]]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A



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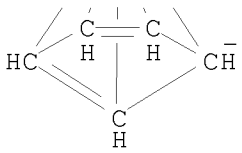
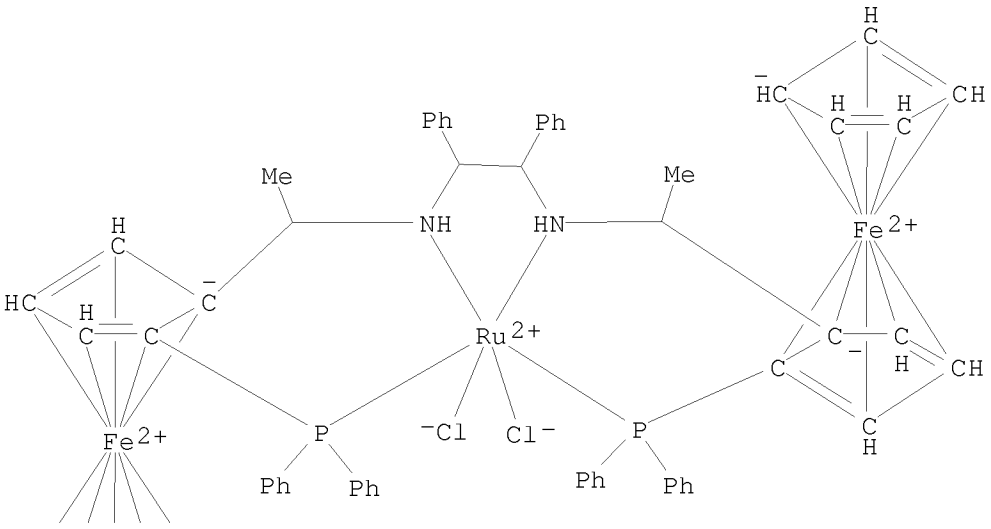


RN 893444-83-2 CAPLUS
CN Ruthenium, dichloro[(2S,2''S)-1,1''-[[(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis[(imino-κN)-(1S)-ethylidene]]bis[2-(diphenylphosphino-κP)ferrocene]]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A



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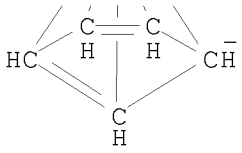
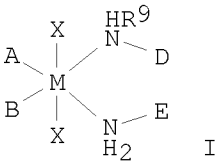


L14 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:504471 CAPLUS
DOCUMENT NUMBER: 145:116145
TITLE: Transition metal complexes as catalysts for asymmetric hydrogenation of ketones or their derivatives
INVENTOR(S): Ding, Kuiling; Jing, Qing
PATENT ASSIGNEE(S): Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 36 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| CN 1680412 | A | 20051012 | CN 2005-10023632 | 20050127 |

CN 1331874 C 20070815
CN 101037451 A 20070919 CN 2007-10095929 20050127
PRIORITY APPLN. INFO.: CN 2005-10023632 A3 20050127
OTHER SOURCE(S): MARPAT 145:116145
GI

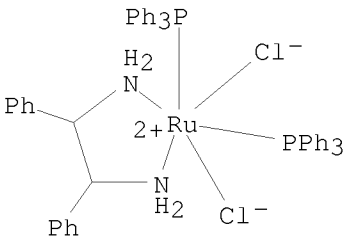


I

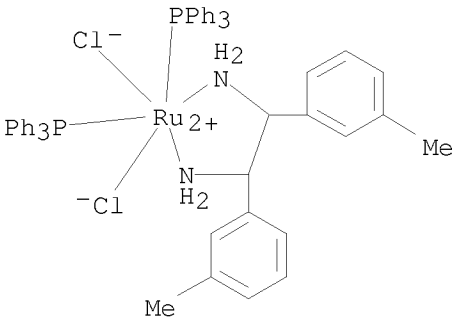
AB The title transition metal complexes with a general formula I were synthesized by reacting transition metal salts with diamine ligands or monoamine ligands and diphosphine ligands or monophosphine ligands at a molar ratio of 1:(1-5):(1-5) at 0-100°C for 0.5-20 h in organic solvents, where A or B is tris(C1-12-alkyl)phosphine, or A and B form a ring containing two phosphorous atoms bonded to M; D or E is substituted phenylethyl, or D and E form a ring; M is Ru, Pd, Cu, or Fe; X is Cl, Br, or I; and R is H, methylsulfonyl, or p-methylbenzenesulfonyl. The metal complexes can be used in catalytically asym. hydrogenation of ketone such as acetophenone, benzophenone, Me cyclopropyl ketone, γ-N,N-dimethylamino-α-phenylacetone, and derivs. thereof.

IT 886446-25-9P 894772-54-4P 894772-55-5P
894772-56-6P 894772-57-7P 894772-61-3P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(method of preparation of transition metal complexes used in catalytically asym. hydrogenation of chiral ketones or their derivs.)

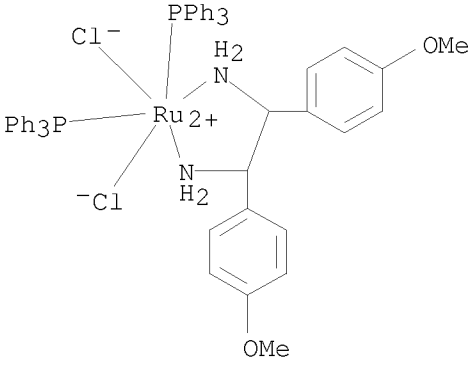
RN 886446-25-9 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)



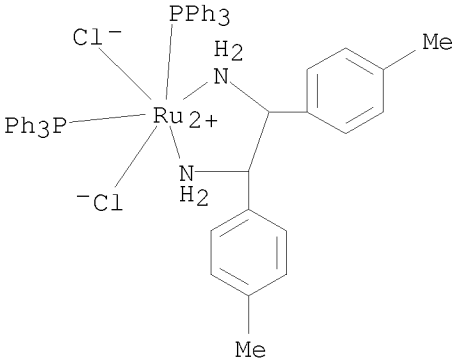
RN 894772-54-4 CAPLUS
CN Ruthenium, [1,2-bis(3-methylphenyl)-1,2-ethanediamine-κN,κN']dichlorobis(triphenylphosphine)- (9CI) (CA INDEX NAME)



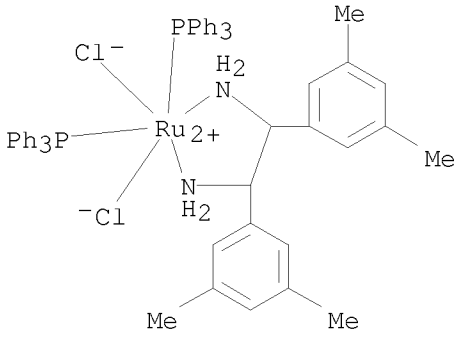

RN 894772-55-5 CAPLUS
CN Ruthenium, [1,2-bis(4-methoxyphenyl)-1,2-ethanediamine-κN,κN']dichlorobis(triphenylphosphine)- (9CI) (CA INDEX NAME)



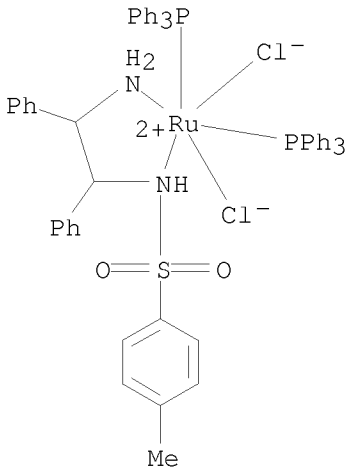

RN 894772-56-6 CAPLUS
CN Ruthenium, [1,2-bis(4-methylphenyl)-1,2-ethanediamine-κN,κN']dichlorobis(triphenylphosphine)- (9CI) (CA INDEX NAME)




RN 894772-57-7 CAPLUS
CN Ruthenium, [1,2-bis(3,5-dimethylphenyl)-1,2-ethanediamine-κN,κN']dichlorobis(triphenylphosphine)- (9CI) (CA INDEX NAME)




RN 894772-61-3 CAPLUS
CN Ruthenium, [N-[2-(amino-κN)-1,2-diphenylethyl]-4-methylbenzenesulfonamide-κN]dichlorobis(triphenylphosphine)- (CA INDEX NAME)




L14 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2006:31707 CAPLUS
DOCUMENT NUMBER: 144:110144
TITLE: Monodonor phosphonite ligands
INVENTOR(S): Docherty, Gordon Findlay; Woodward, Gary; Wills, Martin; Xu, Yingjian
PATENT ASSIGNEE(S): Rhodia Consumer Specialties Limited, UK
SOURCE: PCT Int. Appl., 45 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
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| | | | | |
|---|---|---|---|---|
| WO 2006003431 | A1 | 20060112 | WO 2005-GB2614 | 20050704 |
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| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| EP 1763399 | A1 | 20070321 | EP 2005-757629 | 20050704 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| CN 1993179 | A | 20070704 | CN 2005-80025554 | 20050704 |
| US 20080262269 | A1 | 20081023 | US 2008-631565 | 20080421 |

PRIORITY APPLN. INFO.: GB 2004-14998 A 20040705
WO 2005-GB2614 W 20050704

OTHER SOURCE(S): MARPAT 144:110144

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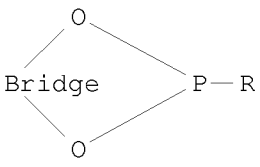



I

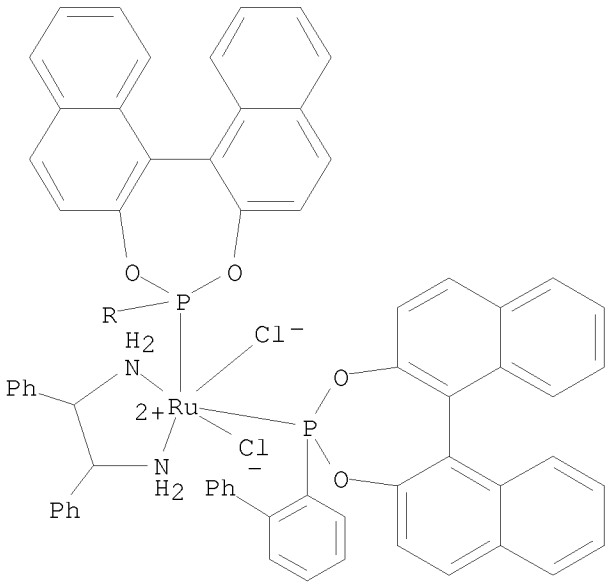
AB The invention provides the use of a metal complex, which is a complex of one or more metal atoms or ions with one or more ligands, as a catalyst in an organic transformation selected from hydrogenation of carbon-heteroatom double bonds, hydroformylation, dialkylzinc addns. to aldehydes, hydrocarboxylation, allylic substitution, oxidation, epoxidn., dihydroxylation, Diels-Alder cycloaddns., dipolar cycloaddns. and rearrangement reactions, wherein one or more of the ligands is I, wherein the bridge group is an organic functional group, and the R group is a substituted Ph group, wherein the R group has only one substituent at the ortho position, and wherein a carbon atom of the R group bonds the R group to the P atom.

IT 798560-97-1 798560-98-2
RL: CAT (Catalyst use); USES (Uses)
(monodonor phosphonite ligands)

RN 798560-97-1 CAPLUS

CN Ruthenium, bis[(11bR)-4-[1,1'-biphenyl]-2-yldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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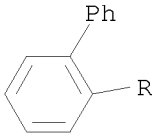
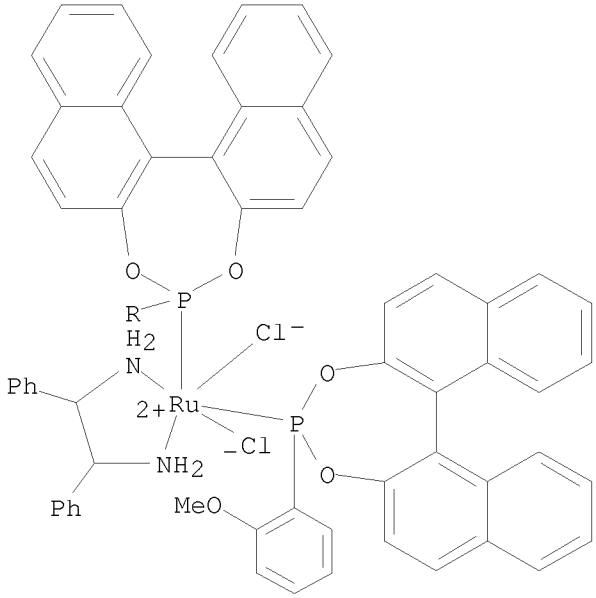
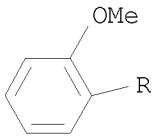



RN 798560-98-2 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(2-methoxyphenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

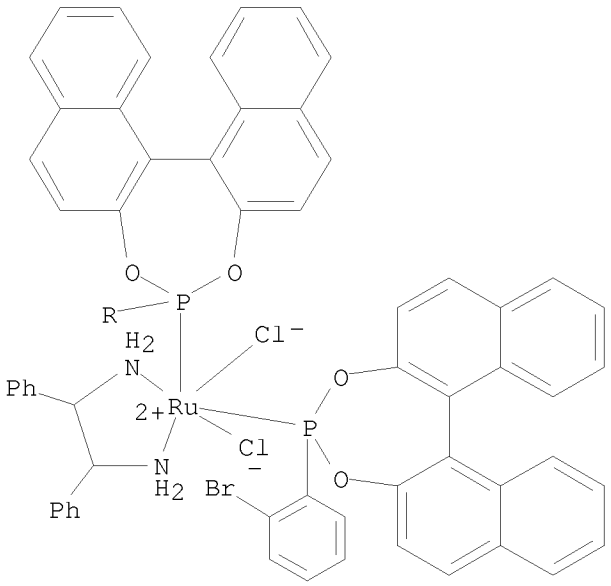



PAGE 2-A




IT 798560-99-3P
RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(monodonor phosphonite ligands)
RN 798560-99-3 CAPLUS
CN Ruthenium, bis[(11bS)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-13)- (CA INDEX NAME)

PAGE 1-A

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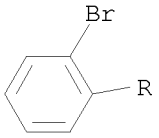



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

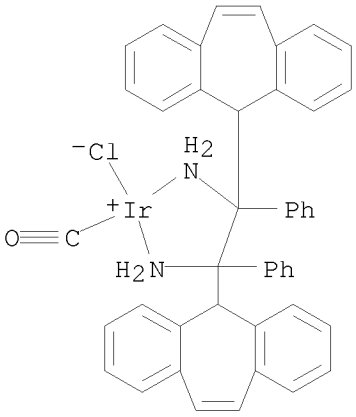
L14 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1307365 CAPLUS
DOCUMENT NUMBER: 144:44588
TITLE: Bistropylidenediamines and their use
INVENTOR(S): Gruetzmacher, Hansjoerg; Maire, Pascal
PATENT ASSIGNEE(S): Lanxess Deutschland G.m.b.H., Germany
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 1604973 | A1 | 20051214 | EP 2005-11538 | 20050527 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, | | | | |

BA, HR, IS, YU

| | | | | |
|---|---|---|---|---|
| DE 102004027772 | A1 | 20060105 | DE 2004-102004027772 | 20040608 |
| IN 2005DE01436 | A | 20070824 | IN 2005-DE1436 | 20050603 |
| US 20050283014 | A1 | 20051222 | US 2005-145839 | 20050606 |
| JP 2006008683 | A | 20060112 | JP 2005-167426 | 20050607 |
| CN 1706806 | A | 20051214 | CN 2005-10083743 | 20050608 |

PRIORITY APPLN. INFO.: DE 2004-102004027772A 20040608
OTHER SOURCE(S): CASREACT 144:44588; MARPAT 144:44588
AB The preparation and the process for the preparation of bistropylidenediamines are reported. The Ir complexes of the bistropylidenediamines were prepared and used as hydrogenation catalysts.
IT 870992-88-4P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation as hydrogenation catalyst)
RN 870992-88-4 CAPLUS
CN Iridium, [(1S,2S)-1,2-bis(5H-dibenzo[a,d]cyclohepten-5-yl)-1,2-diphenyl-1,2-ethanediamine-κN,κN']carbonylchloro-, (SP-4-2)- (9CI) (CA INDEX NAME)




REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:1028670 CAPLUS
DOCUMENT NUMBER: 144:399788
TITLE: Combinatorial micro electrochemistry. Part 4: Cyclic voltammetric redox screening of homogeneous ruthenium(II) hydrogenation catalysts
AUTHOR(S): Lindner, Ekkehard; Lu, Zhong-Lin; Mayer, Hermann A.; Speiser, Bernd; Tittel, Carsten; Warad, Ismail
CORPORATE SOURCE: Institut fuer Anorganische Chemie, Universitaet Tuebingen, Tuebingen, D-72076, Germany
SOURCE: Electrochemistry Communications (2005), 7(10), 1013-1020
CODEN: ECCMF9; ISSN: 1388-2481
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal

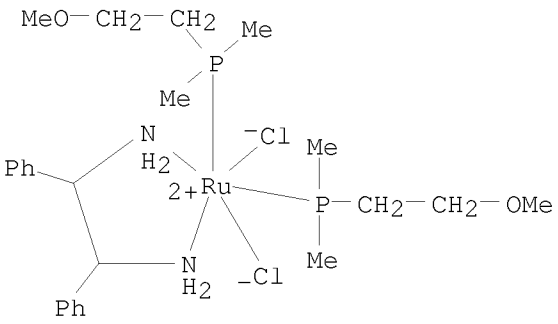
LANGUAGE: English

AB Organometallic Ru(II) complexes, which act as homogeneous hydrogenation catalysts, are characterized electrochem. with respect to their redox properties by a new screening technique (redox screening). Samples of the complexes are dissolved in an electrolyte and placed in the wells of microtiter plates. Electrode bundles are moved under computer control between these wells, and cyclic voltammograms are automatically recorded. Anal. of the current/potential curves shows a relation between the voltammogram shape or position and the catalytic activity of the complexes. Thus, the technique proves well suited as an electrochem.-based high-throughput method.

IT 620173-91-3
RL: CAT (Catalyst use); CPS (Chemical process); CST (Combinatorial study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); CMBI (Combinatorial study); PROC (Process); USES (Uses)
(cyclic voltammetric redox screening of hydrogenation catalysts for acetophenone)

RN 620173-91-3 CAPLUS

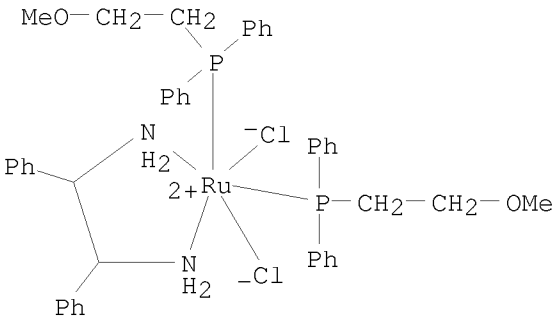
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)dimethylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



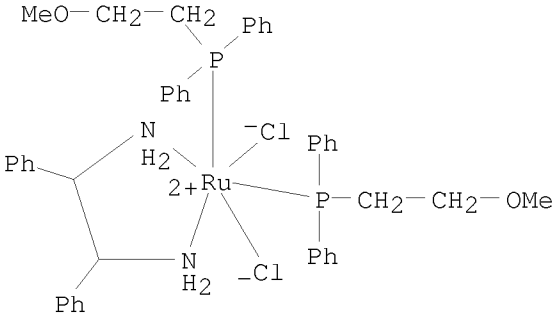

IT 590365-41-6 590384-39-7
RL: CAT (Catalyst use); CPS (Chemical process); CST (Combinatorial study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); CMBI (Combinatorial study); PROC (Process); USES (Uses)
(cyclic voltammetric redox screening of hydrogenation catalysts for phenylbutenone)

RN 590365-41-6 CAPLUS

CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 590384-39-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



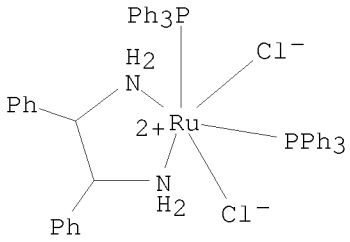
REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:959366 CAPLUS
DOCUMENT NUMBER: 145:62618
TITLE: Asymmetric hydrogenations of ketones catalyzed by Ru-achiral phosphine-enantiopure diamine complexes
AUTHOR(S): Xia, Yu-Qing; Tang, Yuan-You; Liang, Zhi-Ming; Yu, Chang-Bin; Zhou, Xiang-Ge; Li, Rui-Xiang; Li, Xian-Jun
CORPORATE SOURCE: Key Lab of Green Chemistry and Technology, Ministry of Education, Department of Chemistry, Sichuan University, Sichuan, 610064, Peop. Rep. China
SOURCE: Journal of Molecular Catalysis A: Chemical (2005), 240(1-2), 132-138
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 145:62618
AB Five ruthenium complexes, RuCl2(MOTPP)2[(S,S)-DPEN] [MOTPP = tris(4-methoxyphenyl)phosphine], RuCl2(TFTPP)2[(S,S)-DPEN] [TFTPP = tris(4-trifluoromethylphenyl)phosphine], RuCl2(PPh3)2[(S,S)-DPEN], RuCl2(BDPX)[(S,S)-DPEN] [BDPX = 1,2-bis(diphenylphosphinomethyl)benzene],

RuCl2(BISBI)[(S,S)-DPEN][BISBI = 2,2'-bis((diphenylphosphino)methyl)-1,1'-biphenyl] were synthesized and used for the hydrogenation of aromatic ketones. The complexes showed high catalytic activities, especially that the catalytic activity of the complex containing the diphosphine with large bite angle and the complex containing triarylphosphine with electron-donating group were higher than the other three complexes. The enantioselectivities of products were almost not influenced by the electron factors of phosphine.

IT 320338-32-7P 320338-42-9P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and catalyst use of DPEN-rutheniums via ligand exchange of ruthenium phosphines with DPEN)

RN 320338-32-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)




RN 320338-42-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris[4-(trifluoromethyl)phenyl]phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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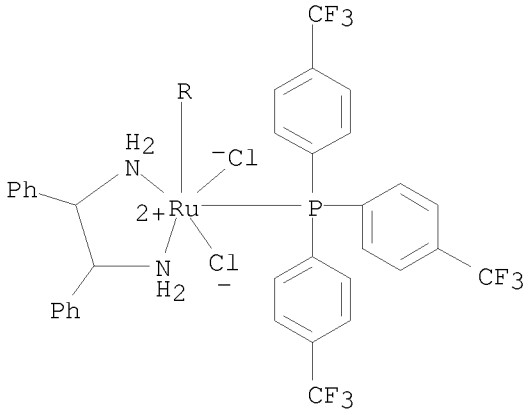

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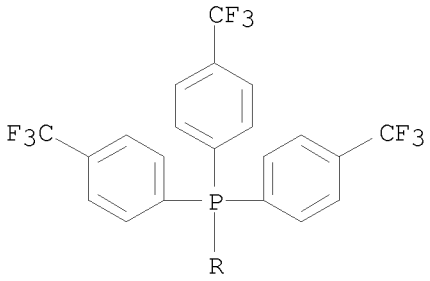


IT 890898-89-2P
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation, catalyst use and crystal structure of [RuCl2(BISBI)(S,S)-DPEN] via ligand exchange of ruthenium dichloride phosphine with diphenylethyldiamine)
RN 890898-89-2 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(4-methoxyphenyl)phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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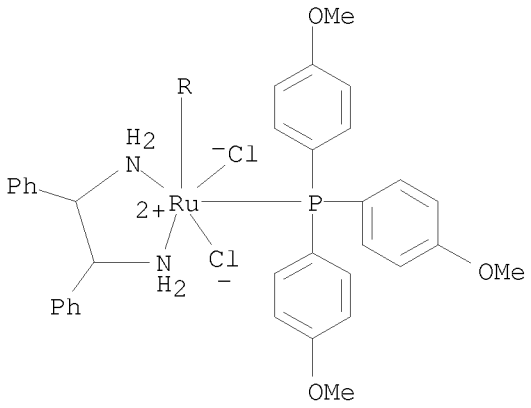

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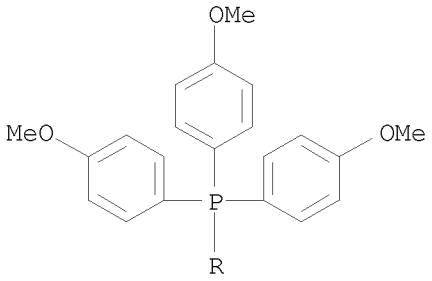
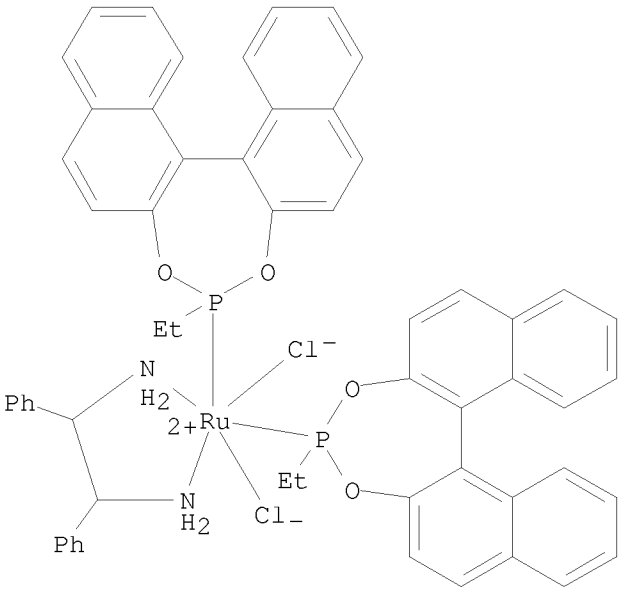
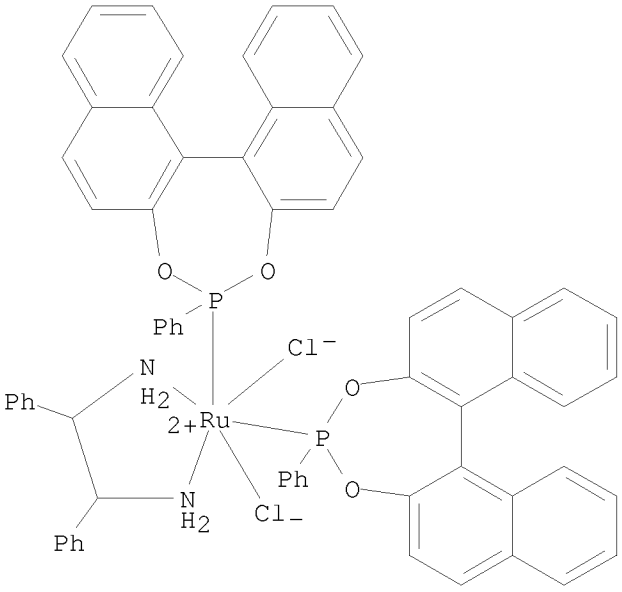



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:921277 CAPLUS
DOCUMENT NUMBER: 143:405648
TITLE: Ruthenium(II) Complexes of Monodonor Ligands: Efficient Reagents for Asymmetric Ketone Hydrogenation
AUTHOR(S): Xu, Yingjian; Clarkson, Guy C.; Docherty, Gordon; North, Carl L.; Woodward, Gary; Wills, Martin
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Journal of Organic Chemistry (2005), 70(20), 8079-8087
CODEN: JOCEAH; ISSN: 0022-3263
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 143:405648
AB A series of BINOL-derived ligands have been prepared and incorporated into ruthenium(II) complexes containing a diamine ligand. The complexes have proven to be excellent catalysts for the asym. hydrogenation of ketones, giving reduction products with enantiomeric excesses of up to 99%.
IT 798560-94-8P 798560-95-9P 798560-96-0P
798560-98-2P 798560-99-3P 798561-00-9P
799291-87-5P 867349-28-8P 867349-42-6P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of ruthenium(II) complexes of monodonor ligands as efficient catalysts for asym. ketone hydrogenation)
RN 798560-94-8 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-ethyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 798560-95-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-phenyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 798560-96-0 CAPLUS
CN Ruthenium, dichlorobis[(11bS)-N,N-dimethyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-amine-κP4][(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

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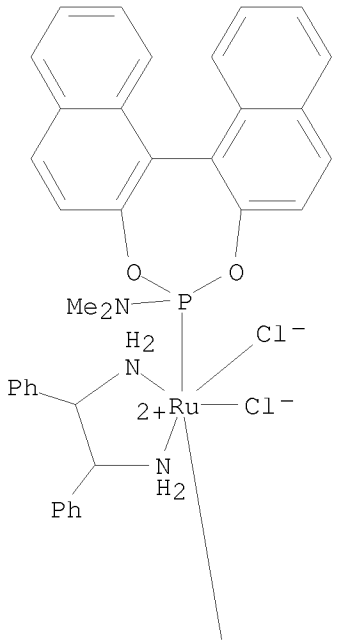


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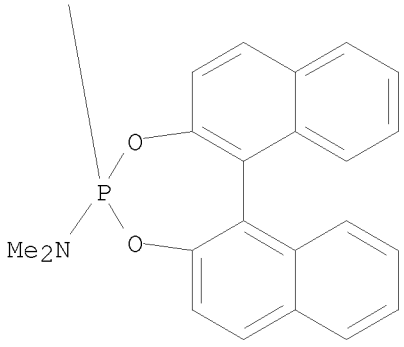


RN 798560-98-2 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(2-methoxyphenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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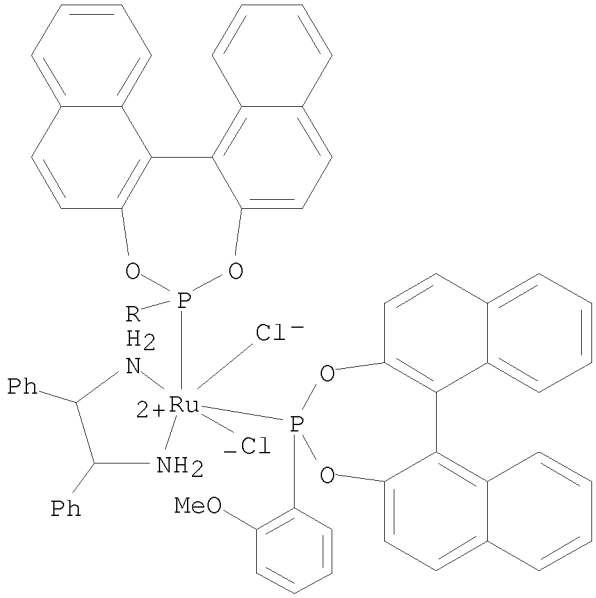


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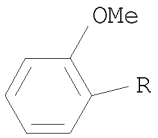
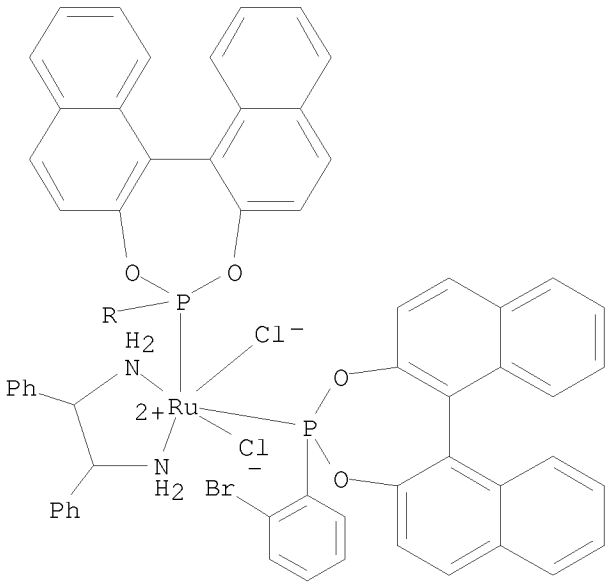



RN 798560-99-3 CAPLUS
CN Ruthenium, bis[(11bS)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-13)- (CA INDEX NAME)

PAGE 1-A

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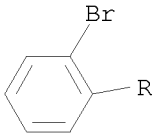


RN 798561-00-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(2-methylphenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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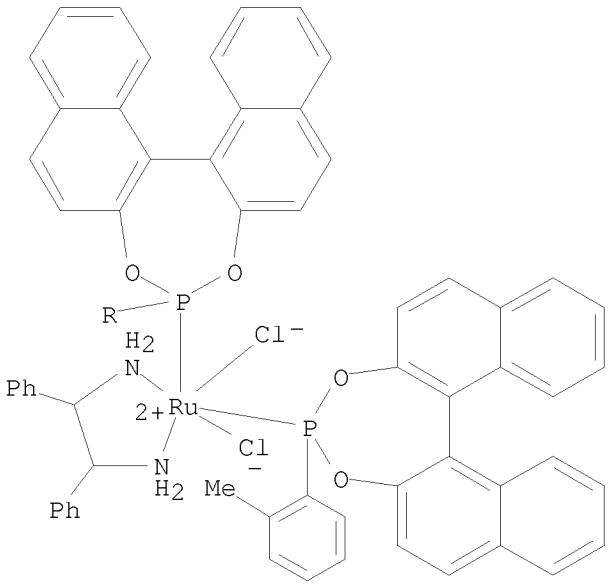


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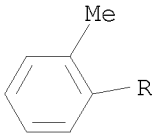


RN 799291-87-5 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(1-methylethoxy)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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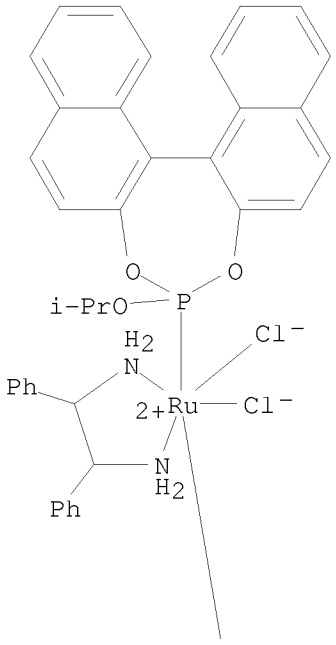


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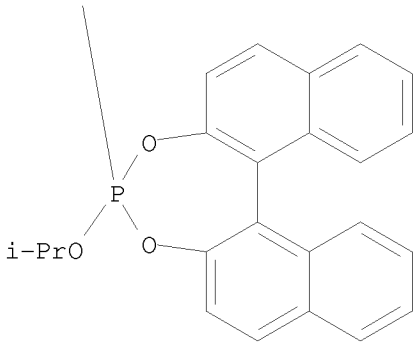


RN 867349-28-8 CAPLUS
CN Ruthenium, bis[(11bS)-4-[1,1'-biphenyl]-2-yldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

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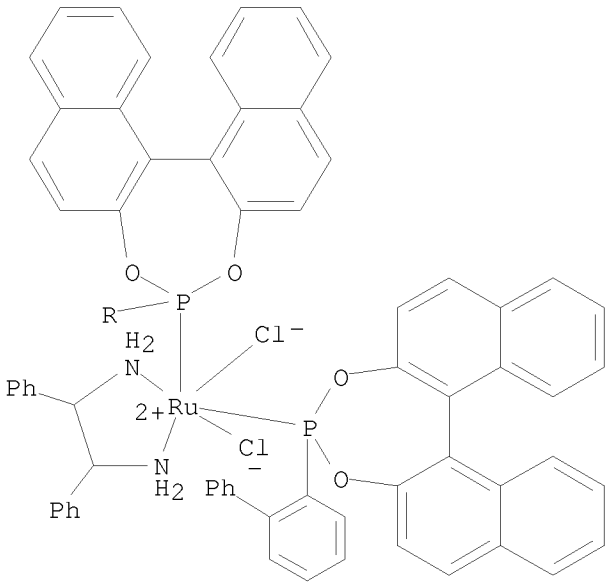

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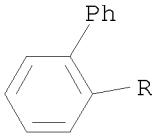

RN 867349-42-6 CAPLUS
CN Ruthenium, bis[(11bR)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

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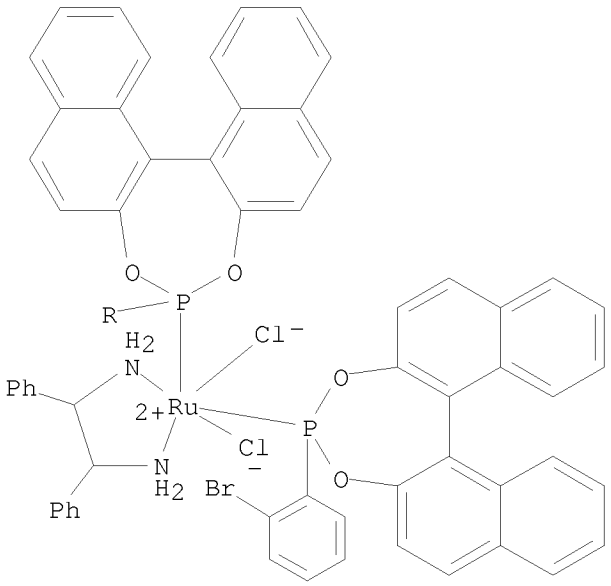


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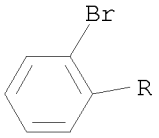
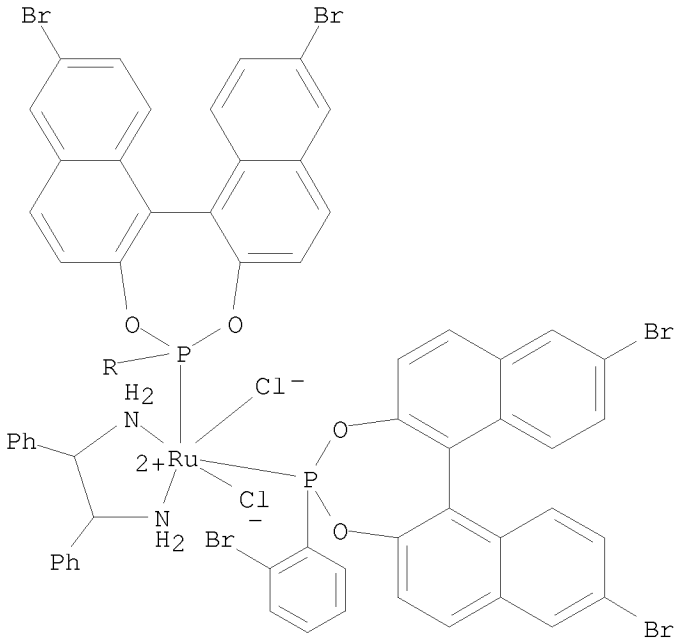



IT 867288-38-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of ruthenium(II) complexes of monodonor ligands as efficient catalysts for asym. ketone hydrogenation)
RN 867288-38-8 CAPLUS
CN Ruthenium, bis[(11bR)-9,14-dibromo-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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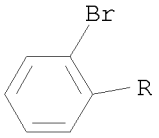



REFERENCE COUNT: 78 THERE ARE 78 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

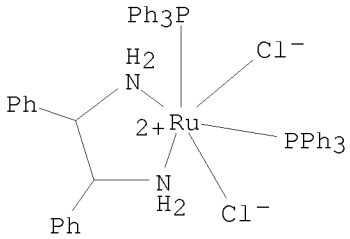
L14 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2005:714960 CAPLUS
DOCUMENT NUMBER: 144:467855
TITLE: Bulky achiral triarylphosphines mimic BINAP in Ru(II)-catalyzed asymmetric hydrogenation of ketones
AUTHOR(S): Jing, Qing; Zhang, Xue; Sun, Jie; Ding, Kuiling
CORPORATE SOURCE: State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, 200032, Peop. Rep. China
SOURCE: Advanced Synthesis & Catalysis (2005), 347(9), 1193-1197
CODEN: ASCAF7; ISSN: 1615-4150
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 144:467855

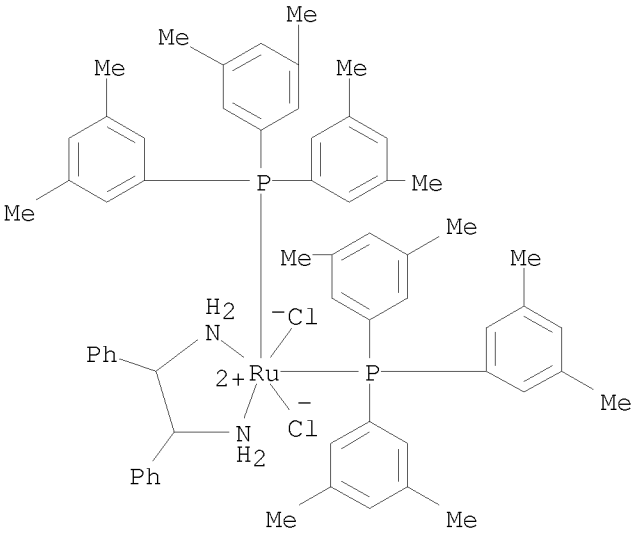
AB Catalysis of the enantioselective hydrogenation of ketones with Ru(II) complexes composed of cheap achiral monodentate phosphine ligands in combination with an enantiopure 1,2-diamine, affording a variety of optically active secondary alcs. with high efficiency and enantioselectivity, is reported. The steric impact of achiral monophosphine ligands in Ru complexes was found to be a critical factor for the high enantioselectivity of the reaction. This finding throws some light on a long-standing challenge of the high cost of chiral bisphosphine ligands, associated with an industrial application of the asym. hydrogenation of ketones.

IT 886446-25-9 886446-34-0
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(crystal structure; preparation of chiral secondary alcs. via asym. hydrogenation of ketones catalyzed by Ru(II) complexes with bulky achiral triarylphosphine ligands and a chiral diamine)

RN 886446-25-9 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)

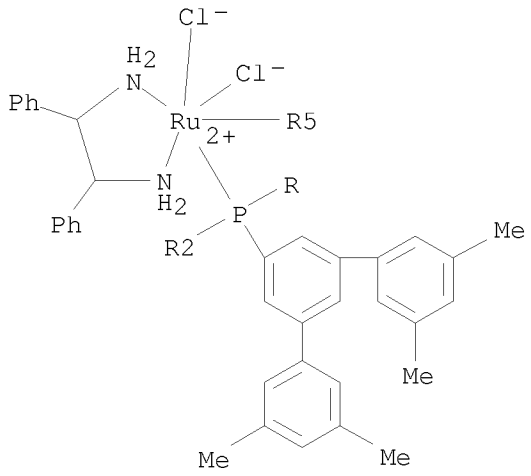



RN 886446-34-0 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3,5-dimethylphenyl)phosphine]-, (OC-6-13)- (9CI) (CA INDEX NAME)




IT 886446-37-3
RL: CAT (Catalyst use); PRP (Properties); USES (Uses)
(mol. structure calculated by mol. mechanics; preparation of chiral secondary
alcs. via asym. hydrogenation of ketones catalyzed by Ru(II) complexes with bulky achiral triarylphosphine ligands and a chiral diamine)
RN 886446-37-3 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3,3'',5,5''-tetramethyl[1,1':3',1''-terphenyl]-5'-yl)phosphine]- (9CI) (CA INDEX NAME)

PAGE 1-A



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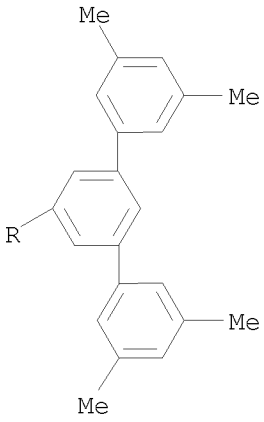


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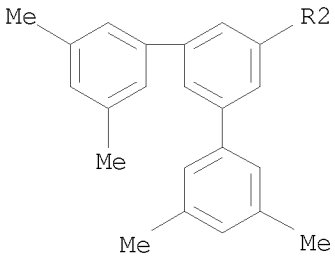


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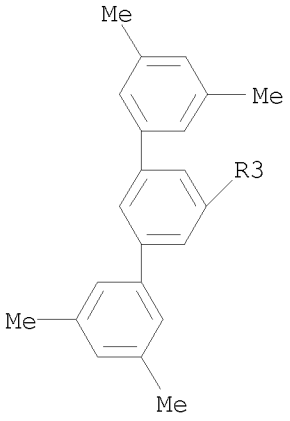

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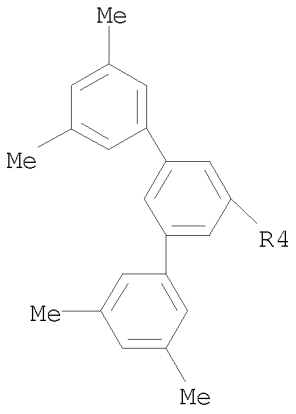


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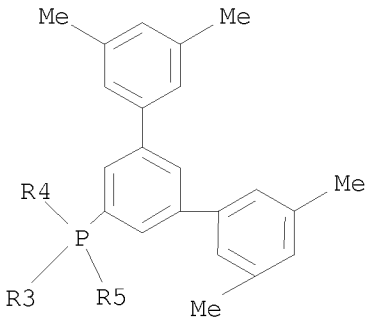
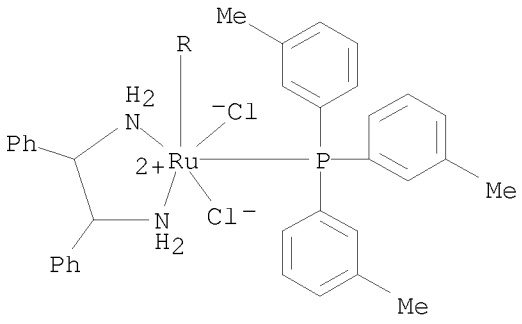



IT 886446-26-0 886446-36-2
RL: CAT (Catalyst use); USES (Uses)
(preparation of chiral secondary alcs. via asym. hydrogenation of ketones catalyzed by Ru(II) complexes with bulky achiral triarylphosphine ligands and a chiral diamine)

RN 886446-26-0 CAPLUS

CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3-methylphenyl)phosphine]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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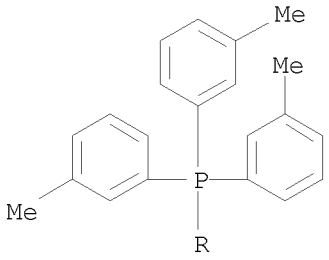
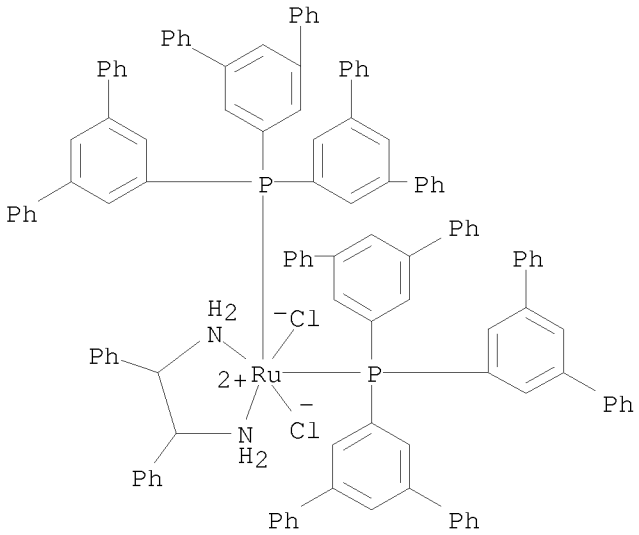



RN 886446-36-2 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris([1,1':3',1''-terphenyl]-5'-yl)phosphine]-, (OC-6-13)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

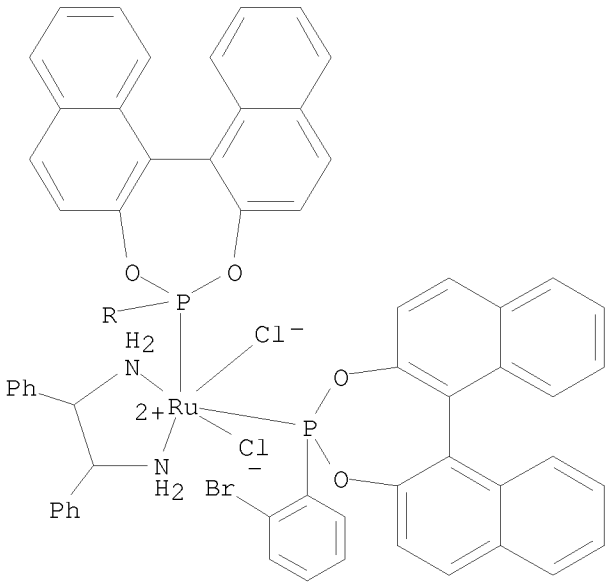
L14 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:811014 CAPLUS
DOCUMENT NUMBER: 142:6263
TITLE: Asymmetric Hydrogenation of Ketones Using a Ruthenium(II) Catalyst Containing BINOL-Derived Monodonor Phosphorus-Donor Ligands
AUTHOR(S): Xu, Yingjian; Alcock, Nat W.; Clarkson, Guy J.; Docherty, Gordon; Woodward, Gary; Wills, Martin
CORPORATE SOURCE: Department of Chemistry, University of Warwick, Coventry, CV4 7AL, UK
SOURCE: Organic Letters (2004), 6(22), 4105-4107
CODEN: ORLEF7; ISSN: 1523-7060
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 142:6263

AB A series of ruthenium(II) complexes containing BINOL-based monodonor phosphorus ligands have been prepared and applied to the asym. catalysis of the hydrogenation of aryl/alkyl ketones. The best ligands for this application are those which contain an aromatic groups with either a methoxide or bromide on the ortho position. Using these ligands, alcs. with ee's of up to 99% are formed.

IT 798560-99-3P
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(crystal structure; stereoselective preparation of arylethanols via chiral ruthenium complexes catalyzed asym. hydrogenation of aryl/alkyl ketones)

RN 798560-99-3 CAPLUS
CN Ruthenium, bis[(11bS)-4-(2-bromophenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN1,κN2]-, (OC-6-13)- (CA INDEX NAME)

PAGE 1-A

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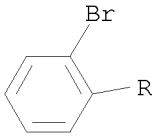
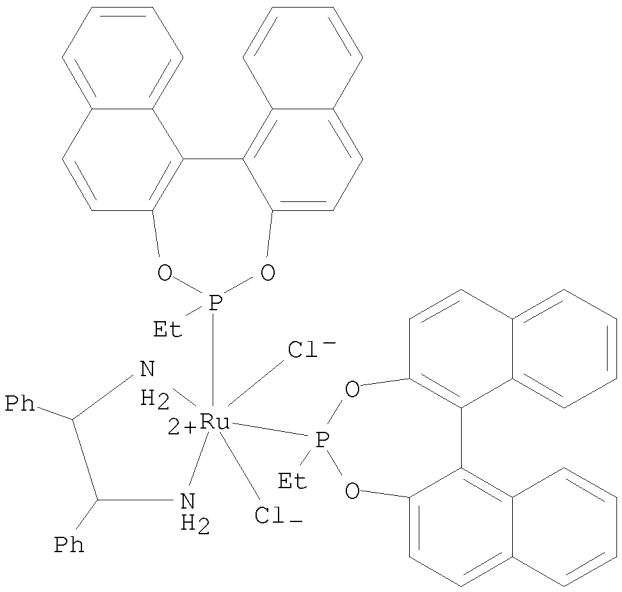
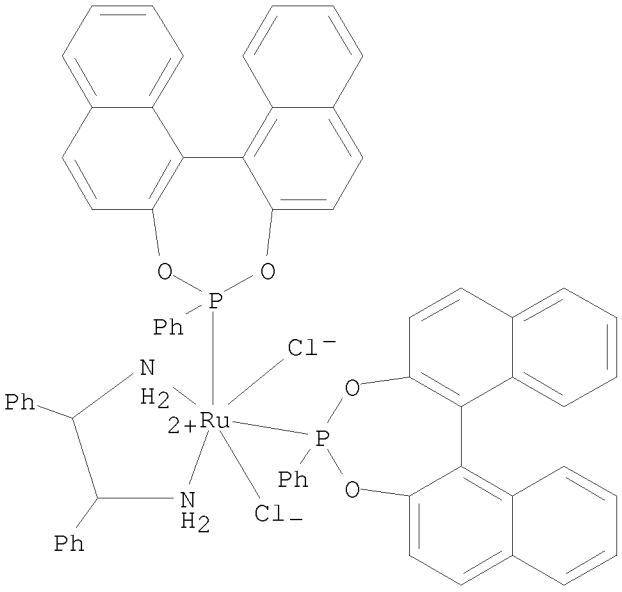



IT 798560-94-8P 798560-95-9P 798560-97-1P
798561-00-9P 799291-87-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of chiral arylphosphorus ligands containing BINOL for ruthenium(II)
complexes as potential asym. hydrogenation catalysts)
RN 798560-94-8 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-ethyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

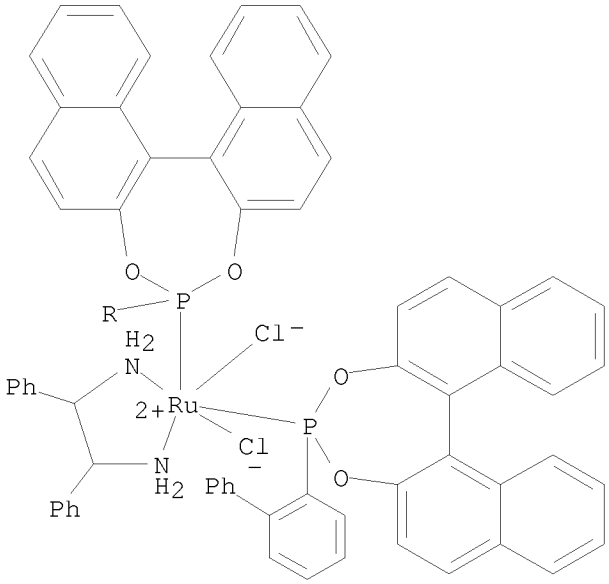


RN 798560-95-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-phenyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 798560-97-1 CAPLUS
CN Ruthenium, bis[(11bR)-4-[1,1'-biphenyl]-2-yldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A



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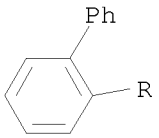
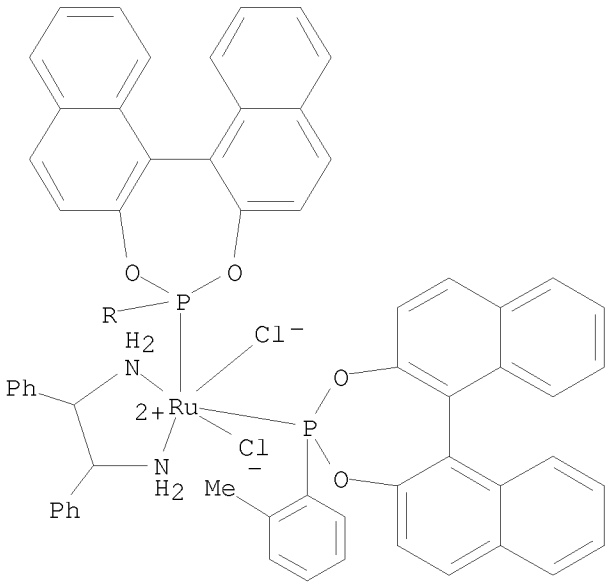


RN 798561-00-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(2-methylphenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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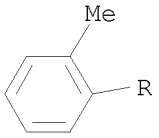
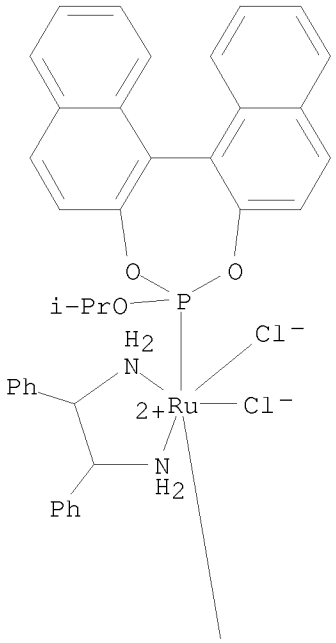



RN 799291-87-5 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(1-methylethoxy)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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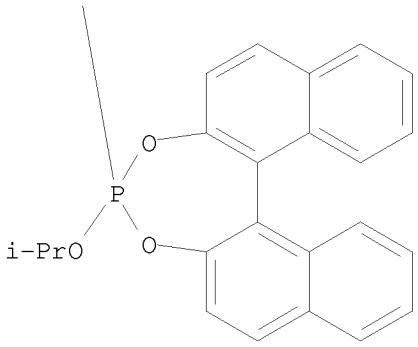
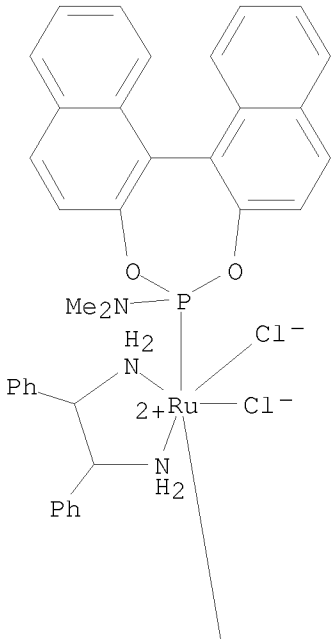



IT 798560-96-0P 798560-98-2P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective preparation of arylethanols via chiral ruthenium complexes catalyzed asym. hydrogenation of aryl/alkyl ketones)

RN 798560-96-0 CAPLUS

CN Ruthenium, dichlorobis[(11bS)-N,N-dimethyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-amine-κP4][(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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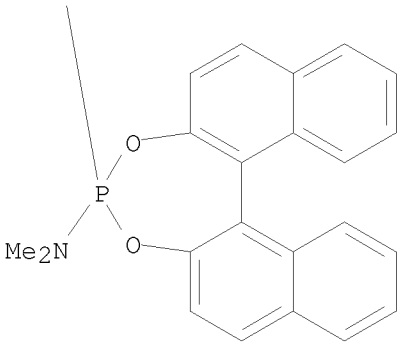
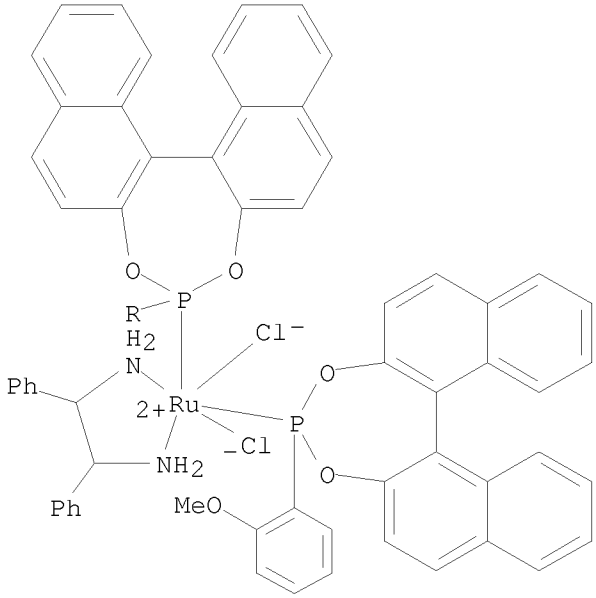



RN 798560-98-2 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(11bS)-4-(2-methoxyphenyl)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A

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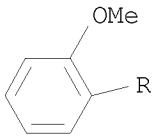


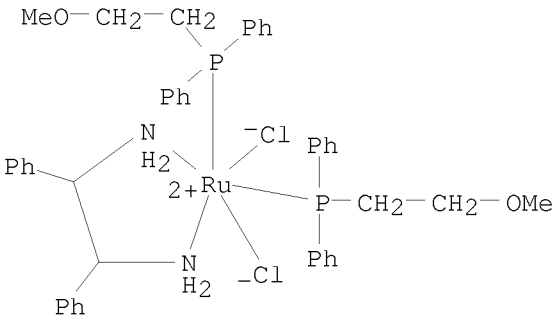

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:278076 CAPLUS
DOCUMENT NUMBER: 141:46356
TITLE: Supported organometallic complexes part 39: cationic diamine(ether-phosphine)ruthenium(II) complexes as precursors for the hydrogenation of trans-4-phenyl-3-butene-2-one
AUTHOR(S): Warad, Ismail; Eichele, Klaus; Mayer, Hermann A.; Lindner, Ekkehard
CORPORATE SOURCE: Institut fur Anorganische Chemie der Universitat Tubingen, Tubingen, D-72076, Germany
SOURCE: Inorganica Chimica Acta (2004), 357(6), 1847-1853 CODEN: ICHAA3; ISSN: 0020-1693
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 141:46356

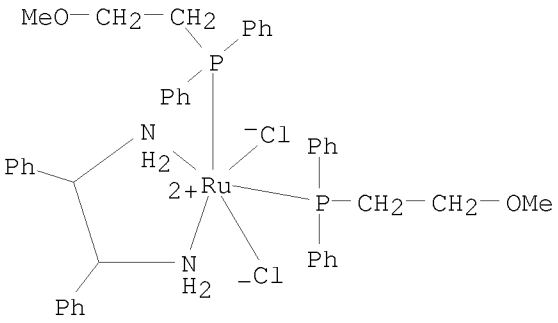
AB Treatment of RuCl2(η1-Ph2PCH2CH2OCH3)2L (1; L = 2,2-dimethylethylenediamine, trans-1,2-cyclohexanediamine, o-phenylenediamine, (R,R)- and (S,S)-1,2-diphenylethyenediamine, 2,2-dimethyl-1,3-propanediamine, 2,2'-bipyridine) with one equivalent of AgX (X = OTf, BF4) in CH2Cl2 gave the monocationic Ru(II) complexes [RuCl(η1-Ph2PCH2CH2OCH3)(η2-Ph2PCH2CH2OCH3)L]X (2). These complexes were characterized by NMR, and mass spectroscopy as well as by elemental analyses, 2 (L = 2,2-dimethylethylenediamine) addnl. by an x-ray structural anal. Complex 2 (L = 2,2-dimethylethylenediamine) crystallizes in the monoclinic space group C2/c with Z = 8. The monocationic and neutral complexes were applied as catalysts in the selective hydrogenation of trans-4-phenyl-3-butene-2-one. With the exception of (L = o-phenylenediamine, 2,2'-bipyridine) and the resp. 2 complexes all catalysts showed high activities and selectivities toward the hydrogenation of the carbonyl group under mild conditions. However, the activity of the cationic catalysts is only half of that of their neutral congeners.

IT 590365-41-6 590384-39-7
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of ruthenium methoxyethylphosphine diamine complexes with chelated methoxyethylphosphine)

RN 590365-41-6 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)




RN 590384-39-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

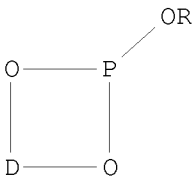


REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2004:181806 CAPLUS
DOCUMENT NUMBER: 140:217810
TITLE: Process for the preparation of phosphites and complexes with transition metals and their use as catalyst
INVENTOR(S): Scholz, Ulrich; Vogl, Erasmus; Gerlach, Arne; Hassfeld, Jorma; Meseguer, Benjamin
PATENT ASSIGNEE(S): Bayer Chemicals AG, Germany
SOURCE: Eur. Pat. Appl., 24 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 1394168 | A1 | 20040303 | EP 2003-18513 | 20030816 |
| EP 1394168 | B1 | 20080521 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| DE 10240803 | A1 | 20040311 | DE 2002-10240803 | 20020830 |
| IN 2003MU00805 | A | 20050401 | IN 2003-MU805 | 20030814 |
| AT 396196 | T | 20080615 | AT 2003-18513 | 20030816 |
| US 20040116726 | A1 | 20040617 | US 2003-650012 | 20030826 |
| US 6992201 | B2 | 20060131 | | |
| JP 2004091488 | A | 20040325 | JP 2003-303492 | 20030827 |
| CN 1495189 | A | 20040512 | CN 2003-132748 | 20030829 |

PRIORITY APPLN. INFO.: DE 2002-10240803 A 20020830
OTHER SOURCE(S): CASREACT 140:217810; MARPAT 140:217810
GI



I

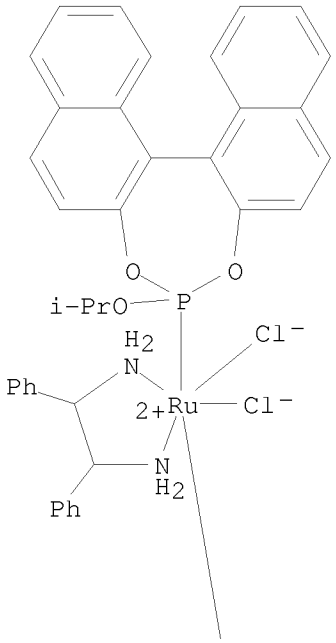
AB The preparation of phosphites, I (D = (un)substituted 1,1'-biphenyl-2,2'-diyl, 1,1'-binaphthyl-2,2'-diyl, etc.; R = C1-12 alkyl, C2-12 alkenyl, C1-12 haloalkyl, C5-15 arylalkyl, C4-14 aryl, etc.), and their transition metal complexes, useful as catalysts, is described. Thus, reaction of PCl3 with 2-propanol gave isopropyldichloro phosphite which on treatment with (R)-1,1'-binaphthyl-2,2'-diol in the presence of Et3N in THF gave 79% {(R)-1,1'-binaphthyl-2,2'-diyl}-isopropylphosphite. Reaction of Rh(COD)2OTf with {(R)-1,1'-binaphthyl-2,2'-diyl}-isopropylphosphite in CH2Cl2 gave the rhodium complex which was useful as catalyst.

IT 663940-90-7P 663940-91-8P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of phosphites and complexes with transition metals and their use as catalyst)

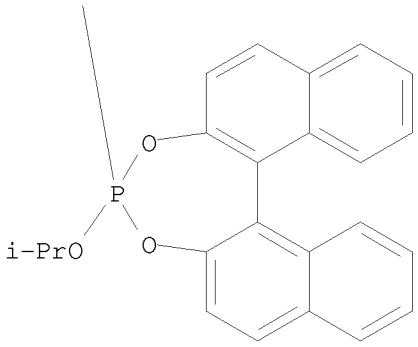
RN 663940-90-7 CAPLUS

CN Ruthenium, dichloro(1,2-diphenyl-1,2-ethanediamine-κN,κN')bis[4-(1-methylethoxy)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4]- (9CI) (CA INDEX NAME)

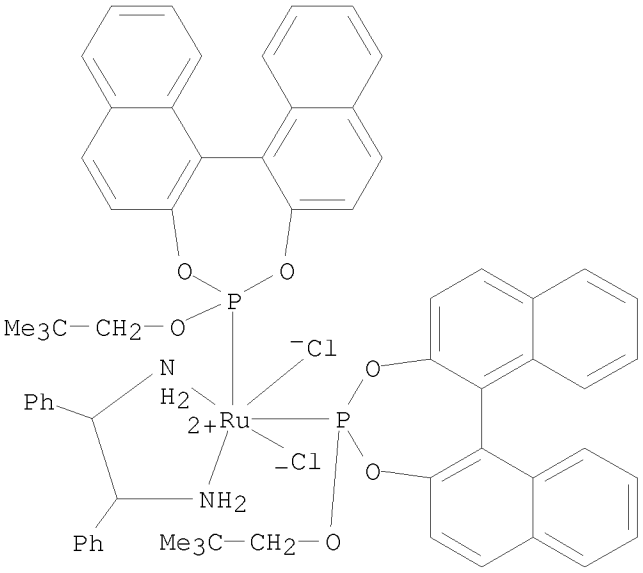
PAGE 1-A




PAGE 2-A




RN 663940-91-8 CAPLUS
CN Ruthenium, dichlorobis[4-(2,2-dimethylpropoxy)dinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-κP4](1,2-diphenyl-1,2-ethanediamine-κN,κN')- (9CI) (CA INDEX NAME)



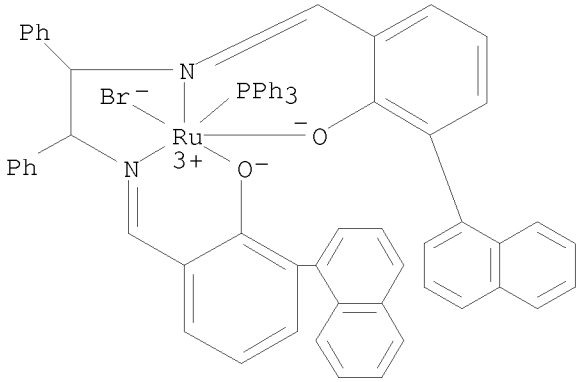

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:788142 CAPLUS
DOCUMENT NUMBER: 140:209395
TITLE: Chiral schiff base ruthenium (III) complexes: Synthesis, characterisation, catalytic and antibacterial studies
AUTHOR(S): Thangadurai, T. Daniel; Ihm, Son-Ki
CORPORATE SOURCE: Department of Chemical and Biomolecular Engineering, Korea Advanced Institute of Science and Technology, Daejeon, 305-701, S. Korea
SOURCE: Journal of Industrial and Engineering Chemistry (Seoul, Republic of Korea) (2003), 9(5), 563-568
CODEN: JIECFI; ISSN: 1226-086X
PUBLISHER: Korean Society of Industrial and Engineering Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:209395
AB Chiral Schiff base Ru(III) complexes [RuX(LL')(EPh3)] (X = Cl or Br; LL' = chiral Schiff base; E = P or As) were synthesized by the reactions of [RuX3(EPh3)3] or [RuBr3(PPh3)2(MeOH)] with appropriate Schiff bases having the donor groups (O,N) viz., bis[3-(1'-naphthyl)salicylidene]cyclohexanediamine (L1) or bis[3-(1'-naphthyl)salicylidene]propylenediamine (L2) or bis[3-(1'-naphthyl)salicylidenephenylenediamine] (L3) in 1:1 molar ratio. The characterization of the complex was done by elemental analyses and spectral (IR, UV-visible and EPR), electrochem. and magnetic moment data. An octahedral structure was tentatively proposed for all the new complexes. The catalytic and antibacterial activities also were carried out for these new complexes.
IT 663153-76-2P
RL: BSU (Biological study, unclassified); CPS (Chemical process); PEP

(Physical, engineering or chemical process); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(preparation and cyclic voltammetry and antibacterial activity and oxidation catalyst for chlorobenzaldehyde)

RN 663153-76-2 CAPLUS

CN Ruthenium, bromo[[2,2'-[[(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[5-(1-naphthalenyl)phenolato-κO]](2-)](triphenylphosphine)-, (OC-6-24)- (9CI) (CA INDEX NAME)

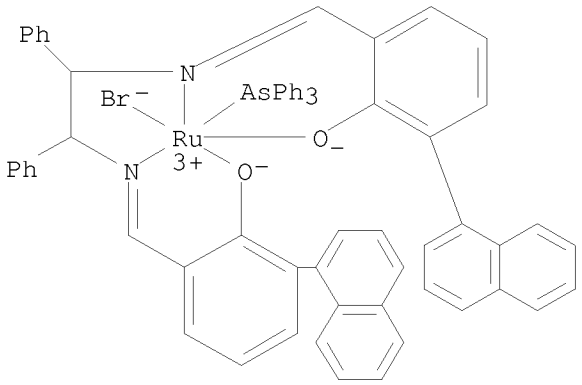



IT 663153-75-1P

RL: BSU (Biological study, unclassified); CPS (Chemical process); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(preparation and cyclic voltammetry and antibacterial activity of)

RN 663153-75-1 CAPLUS

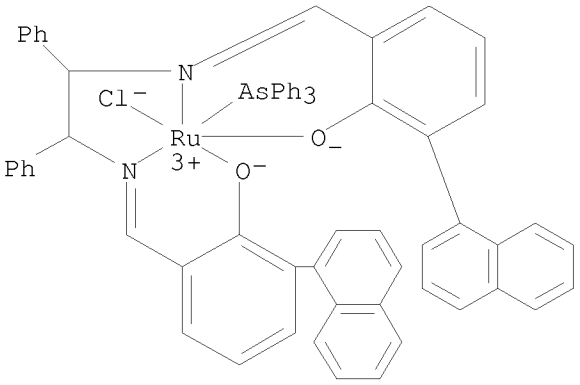
CN Ruthenium, bromo[[1,1'-[[(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[5-(1-naphthalenyl)phenolato-κO]](2-)](triphenylarsine)-, (OC-6-24)- (9CI) (CA INDEX NAME)




IT 663153-74-0P

RL: CAT (Catalyst use); CPS (Chemical process); PEP (Physical, engineering

or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(preparation and cyclic voltammetry and oxidation catalyst for chlorobenzaldehyde)
RN 663153-74-0 CAPLUS
CN Ruthenium, chloro[[1,1'-[[(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[5-(1-naphthalenyl)phenolato-κO]](2-)](triphenylarsine)-, (OC-6-24)- (9CI) (CA INDEX NAME)




REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

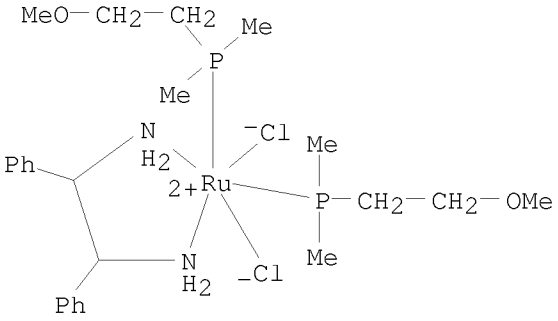
L14 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:537742 CAPLUS
DOCUMENT NUMBER: 139:373625
TITLE: Bis(methoxyethyldimethylphosphine)ruthenium(II) complexes as transfer hydrogenation catalysts
AUTHOR(S): Lu, Zhong-Lin; Eichele, Klaus; Warad, Ismail; Mayer, Hermann A.; Lindner, Ekkehard; Jiang, Zheng-jing; Schurig, Volker
CORPORATE SOURCE: Inst. Anorganische Chemie, Tuebingen, Germany
SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (2003), 629(7-8), 1308-1315
CODEN: ZAACAB; ISSN: 0044-2313
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:373625
AB Ten diamineruthenium(II) complexes containing the hemilabile (2-methoxyethyl)dimethylphosphine ligand, [Cl2Ru(L)(η1-Me2PCH2CH2OMe)2], were synthesized from the starting materials Me2PCH2CH2OMe, [Ru(COD)Cl2]n, and the resp. diamines L. The structure of [Cl2Ru(1,2-diaminocyclohexane)(η1-Me2PCH2CH2OMe)2] reveals that two chlorides are in trans position while in [Cl2Ru(2,2'-bipyridine)(η1-Me2PCH2CH2OMe)2] the two chlorides favor a cis configuration. Most of the complexes are highly catalytically active in the hydrogen transfer reduction of acetophenone. The replacement of Ph groups for Me functions in the ether-phosphine ruthenium(II) complexes resulted in a switch of the hydrogenation mechanism from direct hydrogenation to transfer hydrogenation. The reason is attributed to the

better donor ability of Me groups compared to Ph substituents. Thus, the metal center becomes more electron-rich and inhibits the binding of dihydrogen to the ruthenium(II) complex fragment.

IT 528522-16-9
RL: CAT (Catalyst use); USES (Uses)
(catalytic activity in transfer hydrogenation of acetophenone)

RN 528522-16-9 CAPLUS

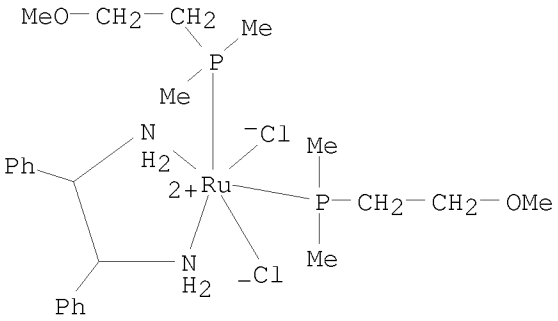
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)dimethylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



IT 620173-91-3P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation and catalytic activity in transfer hydrogenation of acetophenone)

RN 620173-91-3 CAPLUS

CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)dimethylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:483146 CAPLUS
DOCUMENT NUMBER: 139:373586
TITLE: Supported organometallic complexes Part 34: synthesis and structures of an array of

diamine(ether-phosphine)ruthenium(II) complexes and their application in the catalytic hydrogenation of trans-4-phenyl-3-butene-2-one

AUTHOR(S): Lindner, Ekkehard; Warad, Ismail; Eichele, Klaus; Mayer, Hermann A.

CORPORATE SOURCE: Institut fuer Anorganische Chemie der Universitaet Tuebingen, Tuebingen, D-72076, Germany

SOURCE: Inorganica Chimica Acta (2003), 350, 49-56
CODEN: ICHAA3; ISSN: 0020-1693

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

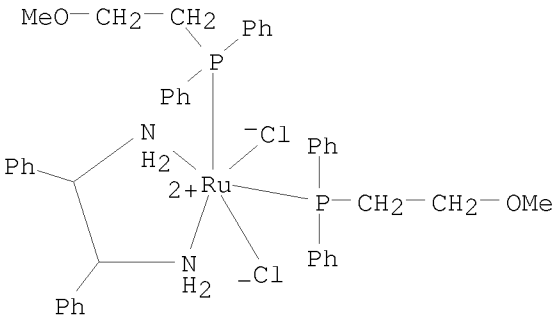
LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:373586

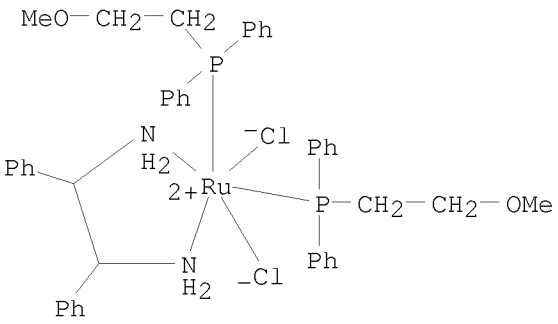
AB The novel diamine-bis(ether-phosphine)ruthenium(II) complexes Cl2Ru(η1-Ph2PCH2CH2OCH3)2(diamine)2 (I) were obtained by reaction of equimolar amts. of Cl2Ru(Ph2PCH2CH2OCH3)2 (2) with the 11 diamines in good yields. X-ray structural studies of I (diamine = trans cyclohexanediamine, 2,2-dimethyl-1,3-propanediamine) show monoclinic unit cells with the space group P21/c. The octahedrally coordinated Ru atoms have each two trans-chlorides and cis-phosphines which is in agreement with NMR studies in solution With the exception of I (diamine = 4-methyl-1,2-benzenediamine) the Ru complexes are highly catalytically active in the hydrogenation of the α,β-unsatd. ketone trans-4-phenyl-3-butene-2-one. In most cases the conversions and selectivities toward the formation of the unsatd. alc. trans-4-phenyl-3-butene-2-ol were 100% with high turnover frequencies under mild conditions.

IT 590365-41-6P 590384-39-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of ruthenium ether phosphine diamine complexes as hydrogenation catalysts for trans-4-phenyl-3-butene-2-one)

RN 590365-41-6 CAPLUS
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)




RN 590384-39-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:273130 CAPLUS
DOCUMENT NUMBER: 139:214151
TITLE: Asymmetric hydrogenation of an α,β-unsaturated ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolution: a consecutive approach
AUTHOR(S): Lindner, Ekkehard; Ghanem, Ashraf; Warad, Ismail; Eichele, Klaus; Mayer, Hermann A.; Schurig, Volker
CORPORATE SOURCE: Institute of Inorganic Chemistry, University of Tubingen, Tubingen, 72076, Germany
SOURCE: Tetrahedron: Asymmetry (2003), 14(8), 1045-1053
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 139:214151

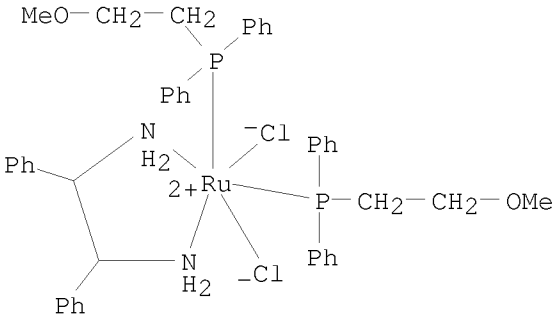
AB The RuCl2(η1-Ph2PCH2CH2OCH3)2(diamine) complexes have been prepared in high yields from the reaction of equimolar amts. of RuCl2(η2-Ph2PCH2CH2OCH3)2 with various kinds of chelating diamines to form five-membered chelates with ruthenium. These novel ruthenium(II) complexes have been used as catalysts in the asym. hydrogenation of the prochiral ketone trans-4-phenyl-3-buten-2-one (I), using 2-propanol and different types of cocatalysts. Whereas complexes with achiral diamines afforded the racemic alcs., complexes with chiral diamines (R,R or S,S) allowed the formation of the corresponding enantiomerically enriched secondary alc. (S or R) with ee values of 45%. In order to obtain the secondary alc. with ee of >99%, the kinetic resolution of enantiomerically enriched I was performed in a consecutive approach using either the lipase-catalyzed enantioselective transesterification of the alc. with isopropenyl acetate as the acyl donor in toluene or the enantioselective hydrolysis of the corresponding acetate in buffer. The determination of the enantiomeric excess (ee) of the resulting enantiomerically enriched secondary alcs. was performed by gas chromatog. using heptakis(2,3-di-O-methyl-6-O-tert-butyldimethylsilyl)-β-cyclodextrin as the chiral stationary phase.

IT 590384-39-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(asym. hydrogenation of an α,β-unsatd. ketone by

diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolution)

RN 590384-39-7 CAPLUS

CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



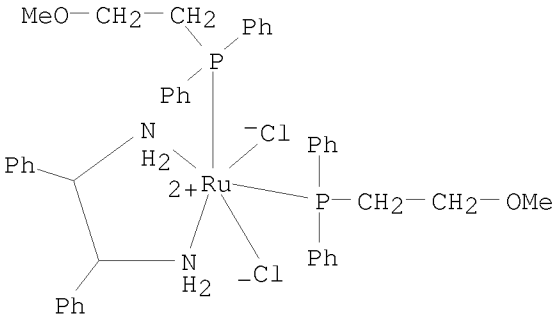
IT 590365-41-6P

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(crystal structure; asym. hydrogenation of an α,β-unsatd. ketone by diamine(ether-phosphine)ruthenium(II) complexes and lipase-catalyzed kinetic resolution)

RN 590365-41-6 CAPLUS

CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)diphenylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:95859 CAPLUS

DOCUMENT NUMBER: 138:394848

TITLE: Supported organometallic complexes. Part 37: synthesis and structures of diamine-bis(methoxyethyldimethylphosphine)ruthenium(II) complexes

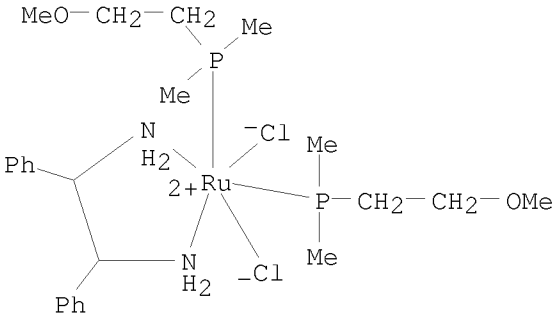
AUTHOR(S): Lu, Zhong-Lin; Eichele, Klaus; Lindner, Ekkehard; Mayer, Hermann A.
CORPORATE SOURCE: Institut fuer Anorganische Chemie, Universitaet Tuebingen, Tuebingen, 72076, Germany
SOURCE: Inorganic Chemistry Communications (2003), 6(4), 365-369
CODEN: ICCOFP; ISSN: 1387-7003
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 138:394848

AB The 1st two examples of diamineruthenium(II) complexes containing the hemilabile (methoxyethyl)dimethylphosphine ligand, Cl2Ru(en)(η1-Me2PCH2CH2OMe)2 (2a) and Cl2Ru[(R,R)-dpen](η1-Me2PCH2CH2OMe)2 (2b) (en = 1,2-diaminoethane, (R,R)-dpen = 1R,2R-1,2-diamino-1,2-diphenylethane) were synthesized and structurally characterized.

IT 528522-16-9P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure)

RN 528522-16-9 CAPLUS

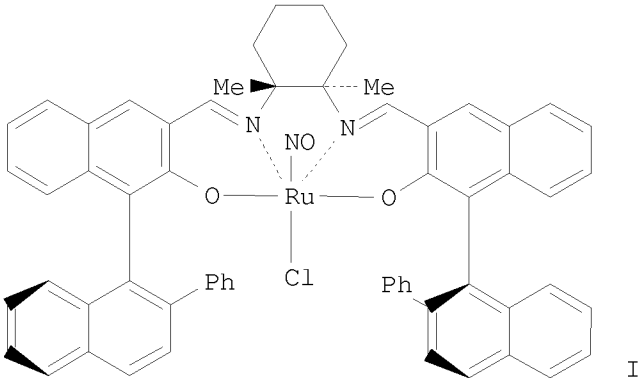
CN Ruthenium, dichloro[(1R,2R)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[(2-methoxyethyl)dimethylphosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)




REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:868270 CAPLUS
DOCUMENT NUMBER: 138:303950
TITLE: (Salen)ruthenium-catalyzed desymmetrization of meso-diols: catalytic aerobic asymmetric oxidation under photo-irradiation
AUTHOR(S): Shimizu, Hideki; Nakata, Kenya; Katsuki, Tsutomu
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Graduate School, Kyushu University 33, CREST, Japan Science and Technology (JST), Fukuoka, 812-8581, Japan
SOURCE: Chemistry Letters (2002), (11), 1080-1081
CODEN: CMLTAG; ISSN: 0366-7022
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English

OTHER SOURCE(S): CASREACT 138:303950
GI




I

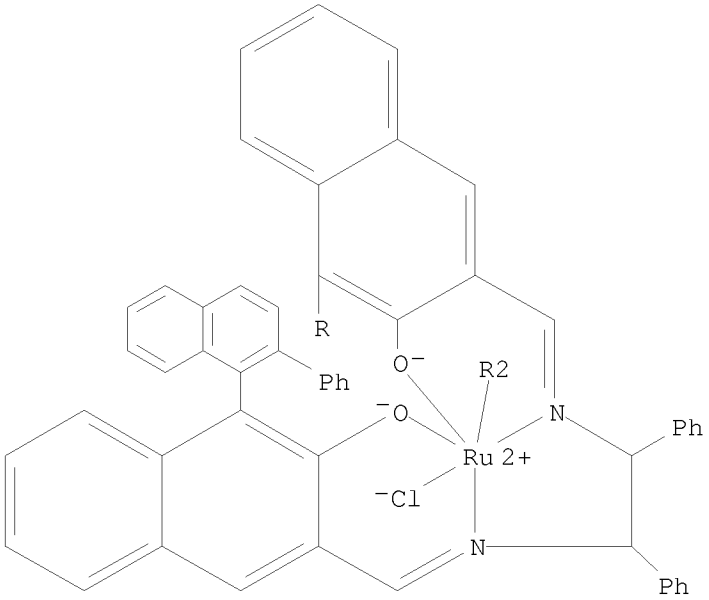
AB Catalytic aerobic oxidation of meso-diols using (nitrosyl)-Ru(salen) I as the catalyst under photo-irradiation proceeded with moderate enantioselectivity (up to 67% ee) to give the corresponding lactols.

IT 313401-38-6
RL: CAT (Catalyst use); USES (Uses)
(desymmetrization of meso-diols by (salen)ruthenium-catalyzed aerobic asym. oxidation under photo-irradiation)

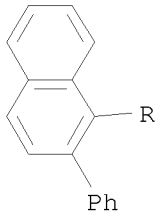
RN 313401-38-6 CAPLUS

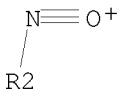
CN Ruthenium, chloro[[(1R,1''R)-3,3''-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[2'-phenyl[1,1'-binaphthalen]-2-olato-κO]](2-)]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A




REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:397832 CAPLUS
DOCUMENT NUMBER: 136:401527
TITLE: Method for preparation of optically active ruthenium complexes and optically active alcohols using them
INVENTOR(S): Hirayama, Naoki; Shibayama, Katsuhiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002155096 | A | 20020528 | JP 2001-130609 | 20010427 |
| PRIORITY APPLN. INFO.: | | | JP 2000-142484 A | 20000515 |

OTHER SOURCE(S): CASREACT 136:401527; MARPAT 136:401527
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

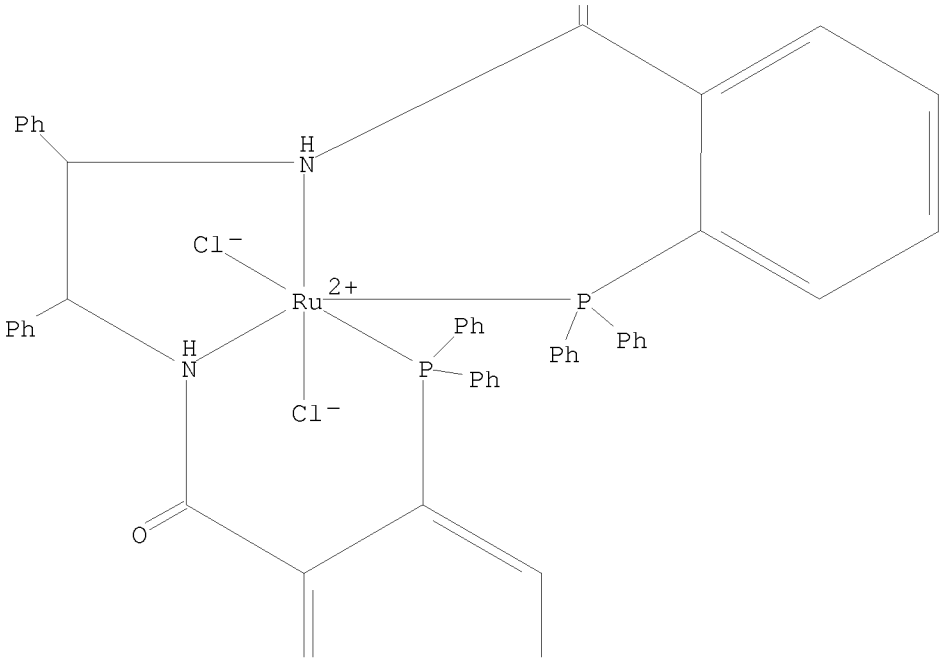
AB Optically active alcs. are prepared by asym. reduction (asym. hydrogenation) of a wade range of carbonyl compds. such as aliphatic carbonyl compds. (typically β-keto esters) and aromatic ketones using an asym. reducing agent having a readily available and inexpensive optically active amide as the asym. source. In particular, optically active tetradentate ruthenium complexes consisting of ruthenium and an optically active compound having two phosphines and two amide linkages in the same mol. [I and II; R1 = H, (un)substituted hydrocarbyl; R2 and R3 are same or different group selected from H and (un)substituted hydrocarbyl; Y = Ph, Me, Et, Pr, cyclohexyl] are used for the above asym. reduction Thus, 1.51 g (R,R)-N,N'-bis[o-(diphenylphosphino)benzoyl]cyclohexane-1,2-diamine (preparation given) and 1.15 g ruthenium(II) dichloride di-Me sulfide complex were added to 200 mL toluene and refluxed for 5 h under N to give 70% ruthenium complex (III). III (146 mg), 3.95 g 4-chloro-3-oxobutanoic acid Et ester,32 mg KOH were added to 30 mL ethanol in a 100-mL autoclave under Ar and vigorously stirred at 100° under H atmospheric at 10 atm to give 95% (S)-4-chloro-3-hydroxybutanoic acid Et ester (19% ee).

IT 431877-91-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(method for preparation of optically active ruthenium complexes and optically active alcs. by asym. reduction (hydrogenation) of ketones using them)

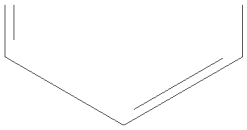
RN 431877-91-7 CAPLUS
CN Ruthenium, dichloro[N,N'-(1,2-diphenyl-1,2-ethanediyl)bis[2-(diphenylphosphino-κP)benzamide-κN]]- (CA INDEX NAME)

PAGE 1-A

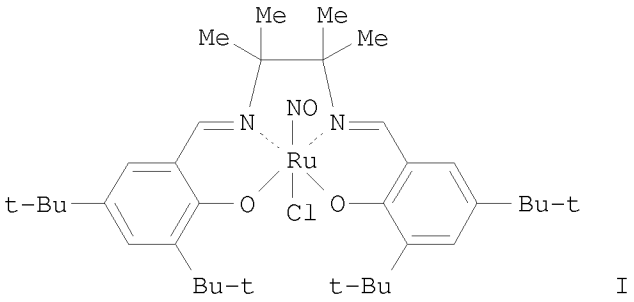
PAGE 2-A



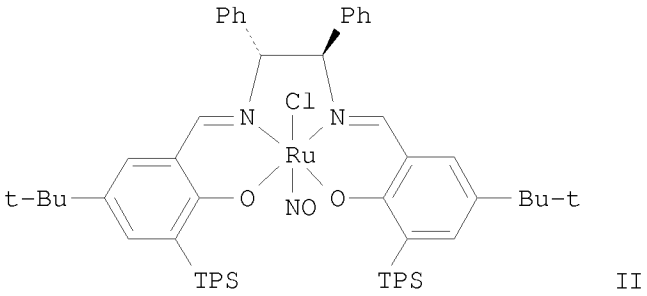
PAGE 3-A



L14 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:303917 CAPLUS
DOCUMENT NUMBER: 137:294842
TITLE: Catalytic aerobic oxidation of diols under photoirradiation: highly efficient synthesis of lactols
AUTHOR(S): Miyata, Atsushi; Furukawa, Mizuki; Irie, Ryo; Katsuki, Tsutomu
CORPORATE SOURCE: Graduate School, Faculty of Science, Department of Chemistry, Kyushu University 33 CREST, JST (Japan Science and Technology), Higashi-ku, Fukuoka, 812-8581, Japan
SOURCE: Tetrahedron Letters (2002), 43(19), 3481-3484
CODEN: TELEAY; ISSN: 0040-4039
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:294842
GI




I



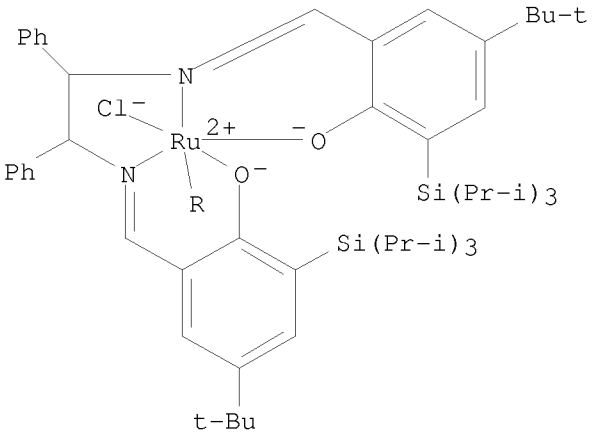

II

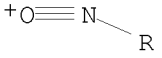
AB Aerobic oxidation of 1,n- and 1,ω-diols with (ON)Ru(salen) complex I as catalyst was found to give lactols in almost quant. yields. Furthermore, in the oxidation of 2,2-dimethylalkane-1,ω-diols, less sterically hindered ω-alcs. were found to be preferentially oxidized when (ON)Ru(salen) complex II was used as the catalyst. N-Decanol was preferentially oxidized in the presence of 2,2-dimethyl-1-propanol when II was the catalyst.

IT 470464-92-7
RL: CAT (Catalyst use); USES (Uses)
(catalytic aerobic oxidation of diols under photoirradn. for highly efficient synthesis of lactols)

RN 470464-92-7 CAPLUS

CN Ruthenium, chloro[[rel-2,2'-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[4-(1,1-dimethylethyl)-6-[tris(1-methylethyl)silyl]phenolato-κO]](2-)]nitrosyl-, (OC-6-34)-(9CI) (CA INDEX NAME)



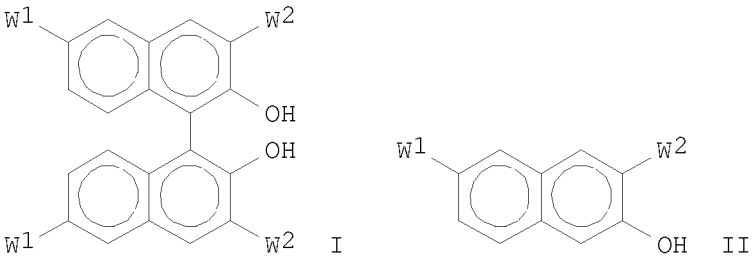




REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:205043 CAPLUS
DOCUMENT NUMBER: 136:247412
TITLE: Preparation of optically-active 2,2'-binaphthol derivatives
INVENTOR(S): Kazuki, Tsutomu
PATENT ASSIGNEE(S): Nissan Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2002080415 | A | 20020319 | JP 2000-266380 | 20000904 |

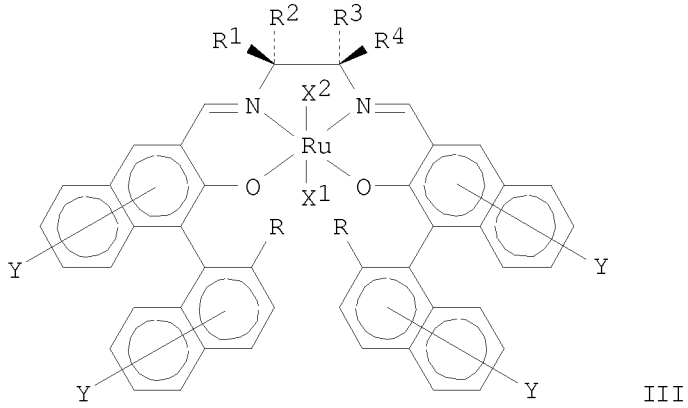
PRIORITY APPLN. INFO.: JP 2000-266380 20000904
OTHER SOURCE(S): CASREACT 136:247412; MARPAT 136:247412
GI




I




II




III

AB The title optically active derivs. I [W1, W2 = H, C1-6 alkyl, cycloalkyl, C2-6 alkenyl, cycloalkenyl, C2-6 alkynyl, cycloalkynyl (these aliphatic group may be substituted with halo, silyl, Ph), C1-6 alkoxy, Ph, C1-5 alkylcarbonyl, C1-5 alkoxycarbonyl, halo; Ph may be substituted with halo, C1-4 alkyl, C1-4 alkoxy, cyano, NO2] or their enantiomers, useful as synthetic intermediates and chiral ligands, are prepared by treating 2-naphthol derivs. II (W1, W2 = same as above) with O-containing gas in the presence of optically active Ru complexes III [R1-R4 = H, C1-8 (halo)alkyl, (halo)cycloalkyl, Ph which may be substituted with halo, C1-4 alkyl, C1-4 alkoxy, cyano, NO2; 2 of R1-R4 may be bonded together to form a C4-8 ring; R = any group given for R1-R4, C1-4 alkoxy, C1-5 alkylcarbonyl, C1-5 alkylcarbonyloxy, C1-5 alkoxycarbonyl, substituted silyl; X1, X2 = C1-5 (halo)alkylcarbonyloxy, (halo)arylcarbonyloxy, C1-4 (halo)alkylsulfonyloxy, (halo)arylsulfonyloxy, halo, OH, PF6, ClO4, BF4, NO3, 1/2CO3, 1/2SO4, 1/3PO4, NO; Y = H, halo, C1-4 alkyl, C1-4 alkoxy, NO3, cyano] and light. A mixture of 6-bromo-2-naphthol, optically active Ru complex IV (preparation given), and toluene was stirred under irradiation with a halogen lamp at 25° for 24 h to give (R)-6,6'-dibromo-2,2'-dihydroxynaphthalene with 68% e.e.

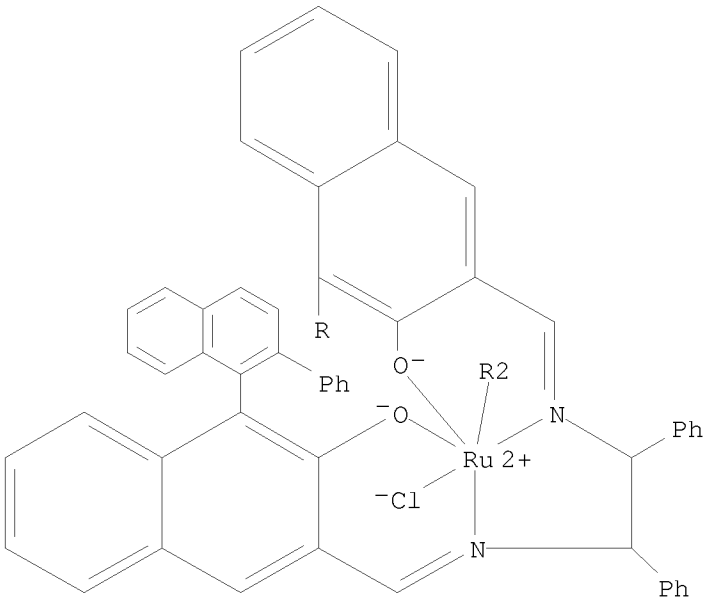
IT 313401-38-6P
RL: CAT (Catalyst use); IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of optically active binaphthols by photochem. coupling of naphthols using Ru complexes)

RN 313401-38-6 CAPLUS

CN Ruthenium, chloro[[(1R,1''R)-3,3''-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[2'-phenyl[1,1'-

binaphthalen]-2-olato-κO]](2-)]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)

PAGE 1-A

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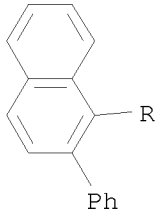
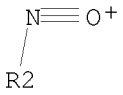
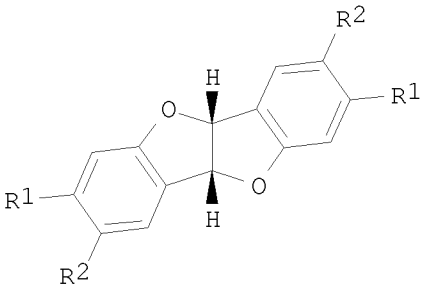



L14 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:56179 CAPLUS
DOCUMENT NUMBER: 136:369625
TITLE: Asymmetric cyclization via oxygen cation radical: enantioselective synthesis of cis-4b,9b-dihydrobenzofuro[3,2-b]benzofurans
AUTHOR(S): Masutani, Kouta; Irie, Ryo; Katsuki, Tsutomu

CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Graduate School, Kyushu University, 33, CREST. Japan Science and Technology (JST), Hakozaki, Higashi-ku, Fukuoka, 812-8581, Japan
SOURCE: Chemistry Letters (2002), (1), 36-37
CODEN: CMLTAG; ISSN: 0366-7022
PUBLISHER: Chemical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 136:369625
GI



I

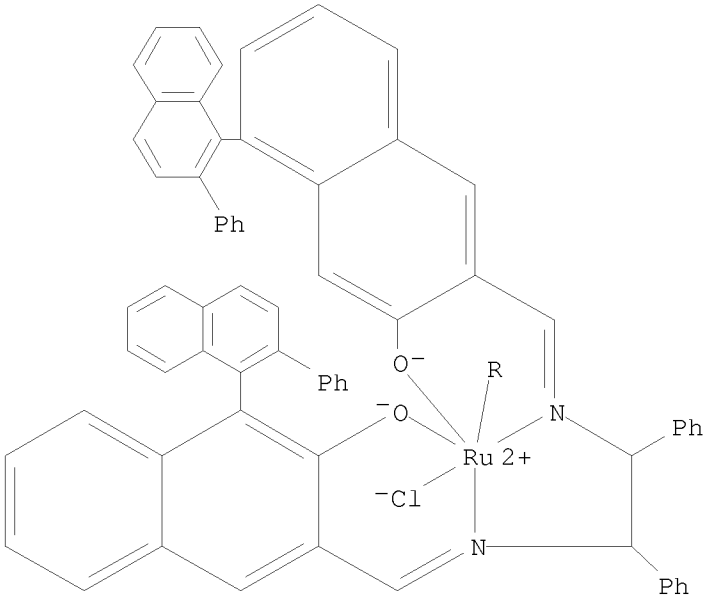
AB Aerobic oxidative cyclization of 2,2'-dihydroxystilbenes via oxygen cation radical to give cis-4b,9b-dihydrobenzofuro[3,2-b]benzofurans, e.g., I (R1 = Me, R2 = H; R1 = H, R2 = Me), was carried out in an enantioselective manner (up to 89% ee) by using a (nitrosyl)Ru(salen) complex as the catalyst under photo-irradiation conditions.

IT 425368-85-0
RL: CAT (Catalyst use); USES (Uses)
(asym. photocyclization of dihydroxystilbenes to cis-4b,9b-dihydrobenzofuro[3,2-b]benzofurans with nitrosylruthenium salen catalyst)

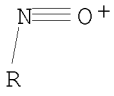
RN 425368-85-0 CAPLUS

CN Ruthenium, chloro[3-[[[(1R,2R)-2-[[[7-(hydroxy-κO)-2'-phenyl[1,1'-binaphthalen]-6-yl]methylene]amino-κN]-1,2-diphenylethyl]imino-κN]methyl]-2'-phenyl[1,1'-binaphthalen]-2-olato(2-)-κO]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)

PAGE 1-A




PAGE 2-A




REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:51478 CAPLUS
DOCUMENT NUMBER: 136:102515
TITLE: Preparation of catalysts for asymmetric transfer hydrogenation, and use thereof
INVENTOR(S): Van den Berg, Michel; Minnaard, Adriaan Jacobus; Feringa, Ben; Gerardus de Vries, Johannes
PATENT ASSIGNEE(S): DSM N.V., Neth.
SOURCE: PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002004466 | A2 | 20020117 | WO 2001-NL517 | 20010706 |

WO 2002004466 A3 20020328
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

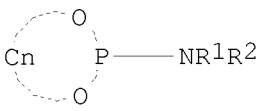
| | | | | | |
|---|---|---|---|---|---|
| NL 1015655 | C2 | 20020108 | NL 2000-1015655 | | 20000707 |
| CA 2414202 | A1 | 20020117 | CA 2001-2414202 | | 20010706 |
| AU 2001071145 | A | 20020121 | AU 2001-71145 | | 20010706 |
| EP 1325013 | A2 | 20030709 | EP 2001-950115 | | 20010706 |
| EP 1325013 | B1 | 20060913 | | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | | |
| CN 1440416 | A | 20030903 | CN 2001-812391 | | 20010706 |
| CN 1289515 | C | 20061213 | | | |
| JP 2004502543 | T | 20040129 | JP 2002-509330 | | 20010706 |
| HU 2004000519 | A2 | 20040628 | HU 2004-519 | | 20010706 |
| HU 2004000519 | A3 | 20051028 | | | |
| CN 1827214 | A | 20060906 | CN 2006-10066948 | | 20010706 |
| AT 339430 | T | 20061015 | AT 2001-950115 | | 20010706 |
| ES 2271043 | T3 | 20070416 | ES 2001-950115 | | 20010706 |
| CN 1974010 | A | 20070606 | CN 2006-10149973 | | 20010706 |
| IN 2003CN00015 | A | 20050408 | IN 2003-CN15 | | 20030103 |
| US 20030199713 | A1 | 20031023 | US 2003-332403 | | 20030107 |
| US 6989461 | B2 | 20060124 | | | |

PRIORITY APPLN. INFO.:

| | | |
|---|---|---|
| NL 2000-1015655 | A | 20000707 |
| CN 2001-812391 | A3 | 20010706 |
| WO 2001-NL517 | W | 20010706 |

OTHER SOURCE(S): CASREACT 136:102515; MARPAT 136:102515


GI

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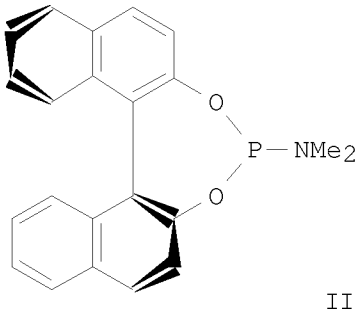



II

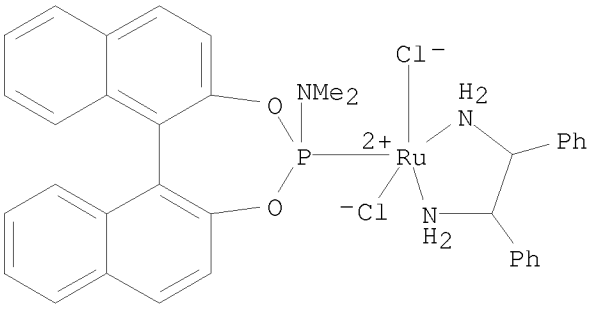

AB Catalyst for asym. (transfer) hydrogenation represented by the formula MLaXbSc, [where M = rhodium or ruthenium; X = counter ion such as Cl, Br, BF4, etc.; S = ligand such as COD, NBD, cyclopentadienyl, etc.; a = 0.5 to 3; b and c, each independently, = 0 to 2; L = chiral ligand I, where Cn together with the two 2 O-atoms and the P-atom forms a substituted or non-substituted ring with 2-4 C-atoms, R1 and R2 each independently = H, an optionally substituted alkyl, aryl, alkaryl or aralkyl group or may

form a (heterocyclic) ring together with the N-atom to which they are bound], are described. A process for the use of such catalyst systems in the asym. (transfer) hydrogenation of olefinically unsatd. compds., or ketone, imine or oxime derivs., in the presence of a hydrogen donor, is also discussed. Thus, hexamethylphosphorus triamide was reacted with (S)-1,1'-bi-2-naphthol to give 88% (II). Phosphine II, in the presence of Rh(COD)2BF4, catalyzes the asym. transfer hydrogenation of 2-acetamidocinnamic acid Me ester with >98% conversion and >97% ee.

IT 389117-12-8
RL: CAT (Catalyst use); FMU (Formation, unclassified); FORM (Formation, nonpreparative); USES (Uses)
(preparation of catalysts for asym. transfer hydrogenation, and use thereof)

RN 389117-12-8 CAPLUS

CN Ruthenium, dichloro(N,N-dimethyldinaphtho[2,1-d:1',2'-f][1,3,2]dioxaphosphepin-4-amine-κP4)(1,2-diphenyl-1,2-ethanediamine-κN,κN')- (9CI) (CA INDEX NAME)




REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2002:51414 CAPLUS
DOCUMENT NUMBER: 136:102282
TITLE: Process for the preparation of β-amino alcohols in syn configuration by diastereoselective hydrogenation of α-amino carbonyl compounds
INVENTOR(S): Inoue, Tsutomu; Katayama, Eiji; Ooka, Hirohito; Sato, Daisuke
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 2002004401 | A1 | 20020117 | WO 2001-JP5941 | 20010709 |
| W: CN, IN, JP, KR, US | | | | |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | |

PRIORITY APPLN. INFO.: JP 2000-208664 A 20000710

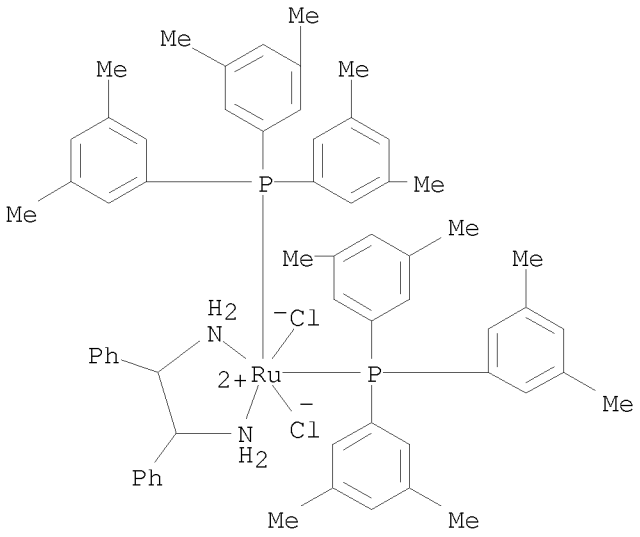
OTHER SOURCE(S): CASREACT 136:102282; MARPAT 136:102282

AB Described is a process for the preparation of β-amino alcs. in syn configuration as represented by the general formula RaC*H(OH)CH(Rb)Rc [wherein Ra and Rc are each optionally substituted alkyl, cycloalkyl, alkenyl, aralkyl, aryl, or aryloxy; Rb is a group selected from among those represented by the formulas R1CO(R2)N-, R1CO(R1'CO)N-, R1SO2(R2)N-, and R1R2N- (wherein R1, R1', and R2 are hydrogen, each optionally substituted alkyl, alkoxy, cycloalkyl, cycloalkoxy, alkenyl, alkenyloxy, aralkyl, aralkyloxy, aryl, or aryloxy, or R1 and R2 or R1 and R1' are linked together to form a 5 to 8-membered heterocyclic ring; provided that when R2 is hydrogen, R1 is not alkoxy, cycloalkoxy, aryloxy, or aralkyloxy.); and C* represents an asym. carbon atom], which comprises reacting an α-amino carbonyl compound of the general formula RaCOCH(Rb)Rc (Ra, Rb, and Rc are same above) with hydrogen or a hydrogen donor in the presence of a transition metal compound and a base. Starting from readily available racemic α-amino carbonyl compds., this process gives syn-β-amino alcs. in high yields with high diastereoselectivity and enantioselectivity. Thus, 10 mL 2-propanol, 4 mL toluene, 5.6 mg [(S)-Xylyl-BINAP]Ru(II)Cl2[(S,S)-DPEN] [Xylyl-BINAP = 2,2'-bis(di-3,5-dimethylphenylphoshino)-1,1'-binaphthyl; DPEN = diphenylethylenediamine], 0.5 N tBuOK/2-propanol (2.0 mL), 1.40 g 2-phthalimidopropiophenone were added to a metal autoclave, pressurized with H at 100 atm, and stirred at 25° for 18 h to give 79% syn-(+)-2-phthalimido-1-phenyl-1-propanol (96% ee).

IT 320338-30-5
RL: CAT (Catalyst use); USES (Uses)
(preparation of β-amino alcs. in syn configuration by diastereoselective hydrogenation of α-amino carbonyl compds.)

RN 320338-30-5 CAPLUS

CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3,5-dimethylphenyl)phosphine]-, (OC-6-13)-(9CI) (CA INDEX NAME)




REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:767505 CAPLUS
DOCUMENT NUMBER: 135:331550
TITLE: Preparation of amino compounds containing phosphines and their ruthenium complexes for alcohol synthesis
INVENTOR(S): Hirayama, Naoki; Shibayama, Katsuhiro
PATENT ASSIGNEE(S): Toray Industries, Inc., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2001294594 | A | 20011023 | JP 2001-27792 | 20010205 |
| PRIORITY APPLN. INFO.: | | | JP 2000-34129 A | 20000210 |

OTHER SOURCE(S): CASREACT 135:331550; MARPAT 135:331550
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Complexes of ruthenium(II) and amino compds. I [R1, R2 = H, noncyclic hydrocarbyl, (un)substituted Ph; Ar = (un)substituted Ph; if R1 = R2 = H, then Ar ≠ Ph], II [R3 = noncyclic hydrocarbyl, (un)substituted Ph; R4, R5 = H, noncyclic hydrocarbyl, (un)substituted Ph; Ar = same as I], III [R6 = H, noncyclic hydrocarbyl, (un)substituted Ph; n = 0-1; Ar = same as I], or IV (R3, R6, Ar, n = same as above) are prepared Alcs. are prepd by reduction of ketones with hydrogen in the presence of the above complexes. E.g., (R,R)-N,N'-bis[2-(diphenylphosphino)benzyl]cyclohexane-1,2-diamine was reacted with dichlororuthenium-dimethylsulfoxide complex for 6 h to give a complex, in the presence of which acetophenone was hydrogenated with H2 in EtOH at 100° for 4 h to give ≥99% (S)-1-phenylethyl alc.
IT 369378-18-7P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(catalyst; preparation of amino compds. containing phosphines and their ruthenium complexes for alc. synthesis)
RN 369378-18-7 CAPLUS
CN Ruthenium, [(1R,2R)-N,N'-bis[[2-(diphenylphosphino-κP)phenyl]methyl]-1,2-diphenyl-1,2-ethanediamine-κN,κN']dichloro-, (OC-6-13)-(9CI) (CA INDEX NAME)

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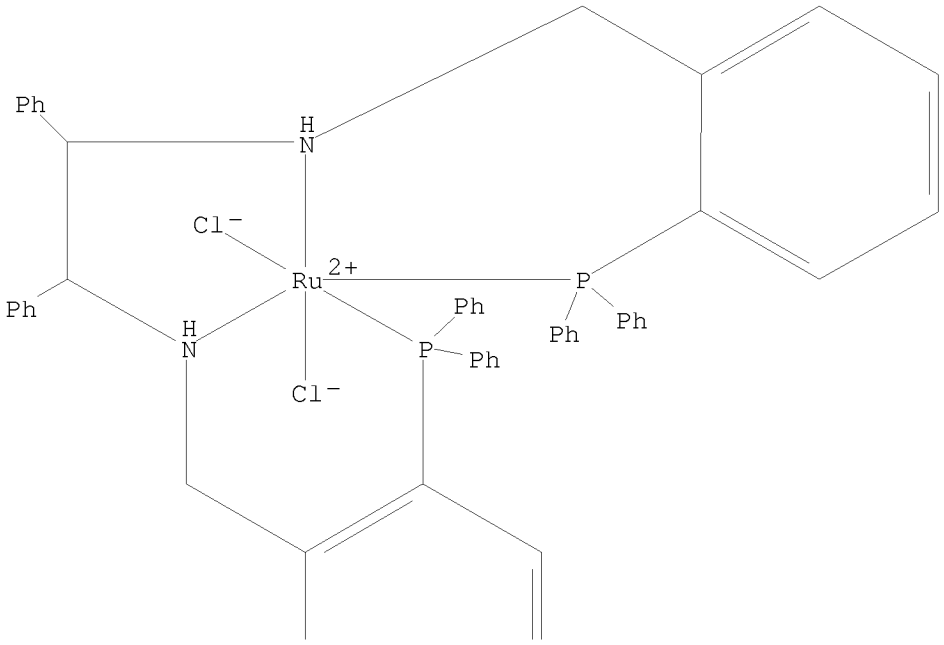
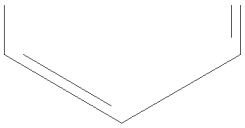


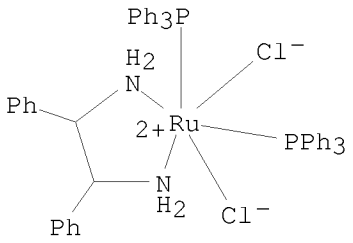

PAGE 2-A



L14 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2001:18934 CAPLUS
DOCUMENT NUMBER: 134:100642
TITLE: Method for preparation of optically active alcohols by hydrogenation of carbonyl compounds using transition metal-optically active amine complex
INVENTOR(S): Katayama, Eiji; Inoue, Tsutomu
PATENT ASSIGNEE(S): Nippon Soda Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 2001002610 | A | 20010109 | JP 1999-169985 | 19990616 |

PRIORITY APPLN. INFO.: JP 1999-117238 A 19990423
OTHER SOURCE(S): CASREACT 134:100642; MARPAT 134:100642
AB Optically active alcs. represented by formula RaC*H(OH)Rb [Ra, Rb = (un)substituted alkyl, alkenyl, cycloalkyl, aralkyl, or aryl] are prepared by hydrogenation of ketones represented by formula RaCORb (Ra, Rb = same as above) in the presence of a mixture of a trivalent phosphorus compound not possessing an asym. center within the mol., transition metal compound, and optically active amine or the reaction product obtained from these compds. This process uses optically active amine as the only asym. source and other readily available compds. as the catalyst sources and provides a practical method for producing in high yields and high selectivity in an industrial scale, optically active alcs. which are useful as intermediates for drugs, agrochems., and liquid crystals. Thus, 5.4 mg bis[tris(3,5-xylyl)phosphine] ruthenium dichloride-(1S,2S)-1,2-diphenylethylenediamine complex (RuCl2[(3,5-xylyl)3P]2(S,S)DPEN) (preparation given) and 6.44 g acetophenone were dissolved in 8 mL isopropanol in a pressure vessel, treated with t-BuOK/2-propanol (0.5 N, 0.5 mL), pressurized with H at 11 atm, and stirred at room temperature for 18 h to give 100% (R)-1-phenylethanol (87 %ee).
IT 320338-32-7 320338-33-8 320338-35-0
320338-36-1 320338-38-3 320338-39-4
320338-40-7 320338-42-9 320338-44-1
320338-45-2
RL: CAT (Catalyst use); USES (Uses)
(preparation of optically active alcs. by hydrogenation of carbonyl compds. using transition metal-optically active amine complex)
RN 320338-32-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(triphenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)




RN 320338-33-8 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3-methylphenyl)phosphine]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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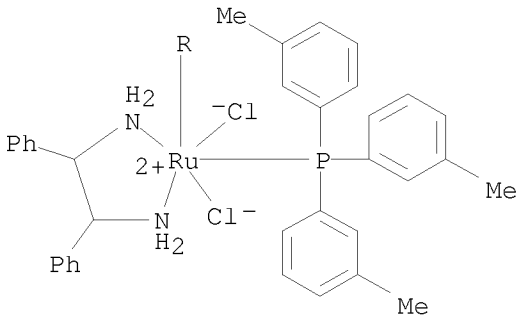


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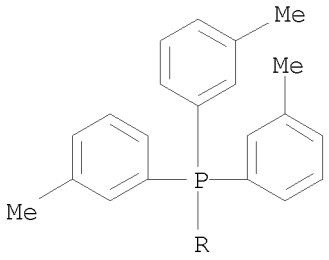
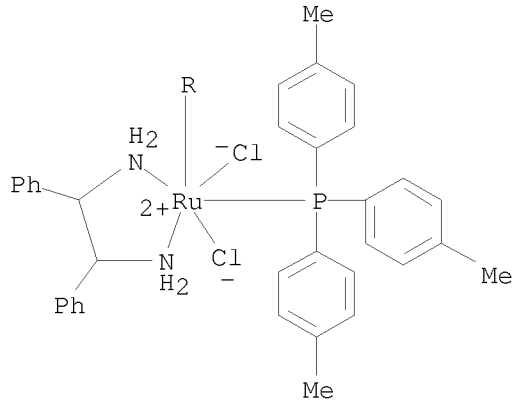
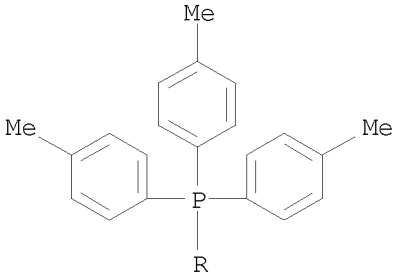



RN 320338-35-0 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(4-methylphenyl)phosphine]-, (OC-6-13)- (9CI) (CA INDEX NAME)

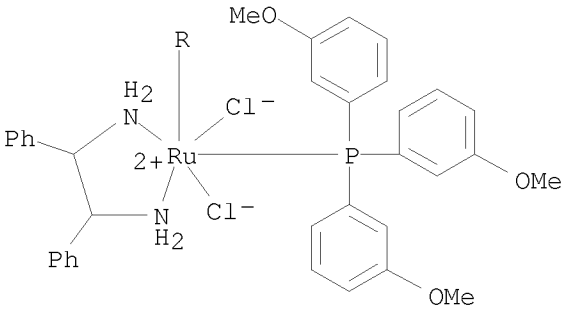
PAGE 1-A

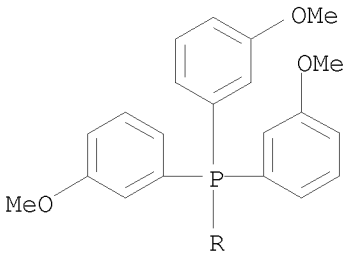


PAGE 2-A

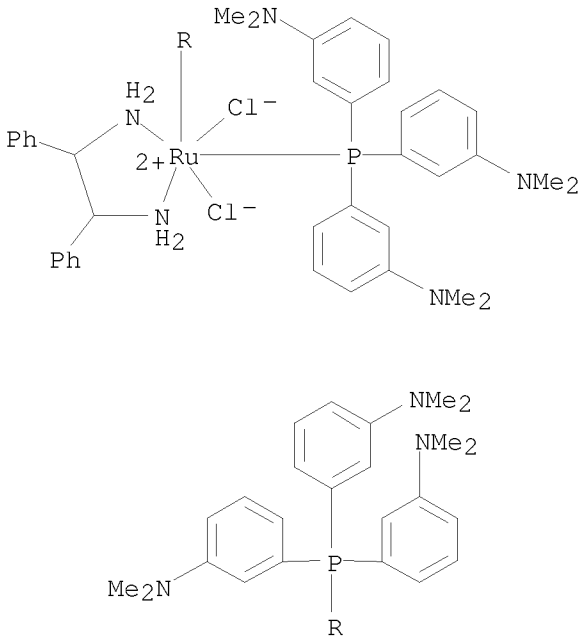



RN 320338-36-1 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3-methoxyphenyl)phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



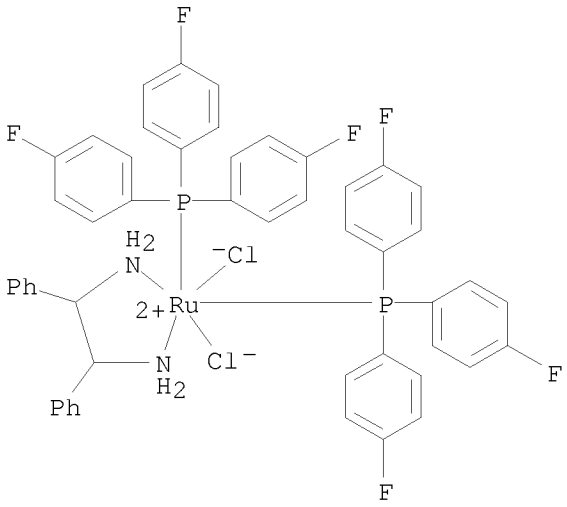




RN 320338-38-3 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[3,3',3''-(phosphinidyne-κP)tris[N,N-dimethylbenzenamine]]-, (OC-6-13)- (9CI) (CA INDEX NAME)





RN 320338-39-4 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(4-fluorophenyl)phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)



RN 320338-40-7 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(4-chlorophenyl)phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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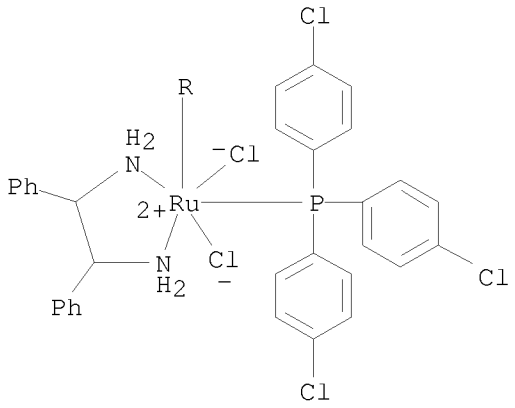


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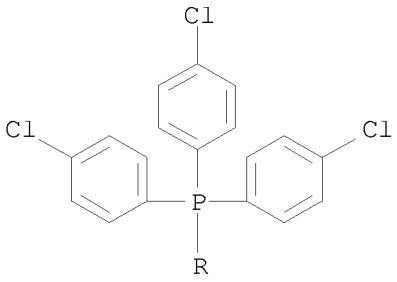


RN 320338-42-9 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris[4-(trifluoromethyl)phenyl]phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

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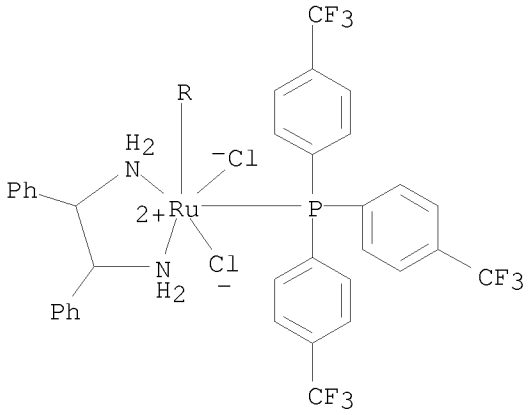

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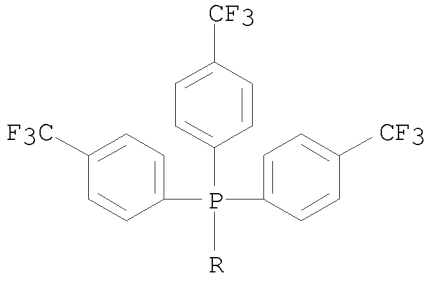
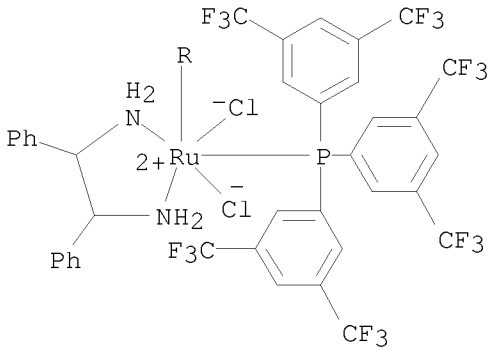


RN 320338-44-1 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris[3,5-bis(trifluoromethyl)phenyl]phosphine-κP]-, (OC-6-13)- (9CI) (CA INDEX NAME)

PAGE 1-A



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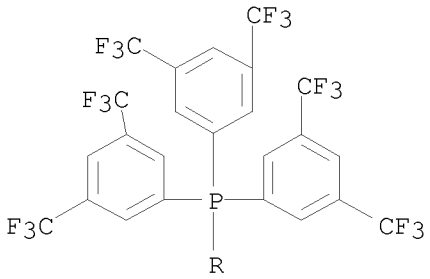
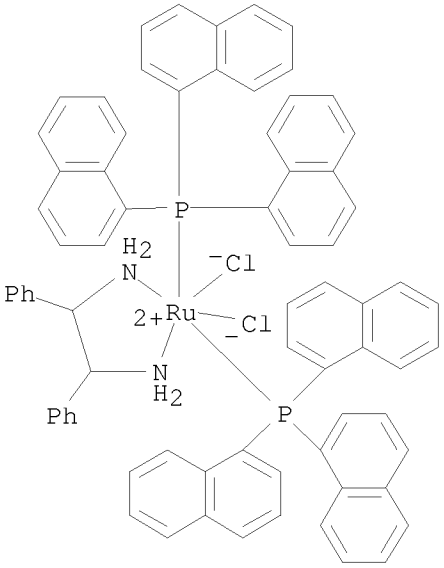
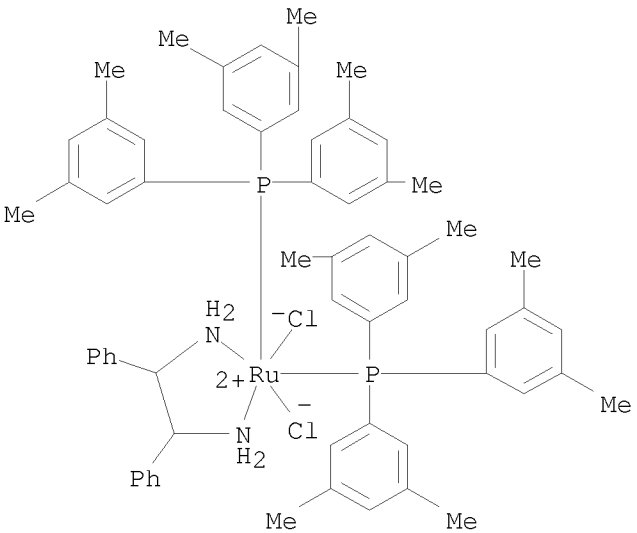


RN 320338-45-2 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis(tri-1-naphthalenylphosphine)-, (OC-6-13)- (9CI) (CA INDEX NAME)




IT 320338-30-5P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(preparation of optically active alcs. by hydrogenation of carbonyl compds. using transition metal-optically active amine complex)
RN 320338-30-5 CAPLUS
CN Ruthenium, dichloro[(1S,2S)-1,2-diphenyl-1,2-ethanediamine-κN,κN']bis[tris(3,5-dimethylphenyl)phosphine]-, (OC-6-13)-(9CI) (CA INDEX NAME)



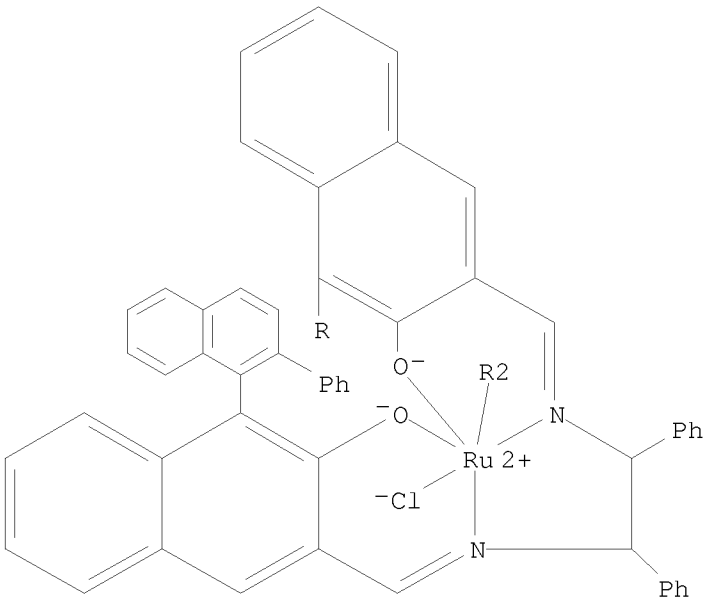
L14 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:737781 CAPLUS
DOCUMENT NUMBER: 134:56468
TITLE: Asymmetric aerobic oxidative coupling of 2-naphthol derivatives catalyzed by photo-activated chiral (NO)Ru(II)-salen complex
AUTHOR(S): Irie, Ryo; Masutani, Kouta; Katsuki, Tsutomu
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Graduate School, Kyushu University 33, Fukuoka, 812-8581, Japan
SOURCE: Synlett (2000), (10), 1433-1436
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:56468

AB Optically active 2,2'-binaphthol (BINOL) derivs. were synthesized with moderate to good enantioselectivity via aerobic oxidative coupling of 2-naphthols using a chiral (NO)Ru(II)-salen complex as a catalyst under irradiation with visible light.

IT 313401-38-6
RL: CAT (Catalyst use); USES (Uses)
(asym. aerobic oxidative coupling of naphthols catalyzed by photo-activated ruthenium salen complex)

RN 313401-38-6 CAPLUS
CN Ruthenium, chloro[[(1R,1''R)-3,3''-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[2'-phenyl[1,1'-binaphthalen]-2-olato-κO]](2-)]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)

PAGE 1-A



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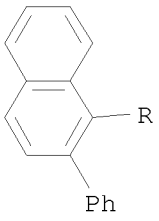
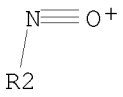
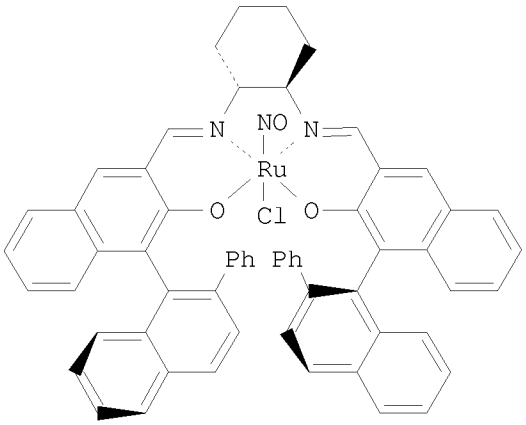



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2000:397972 CAPLUS
DOCUMENT NUMBER: 133:192919
TITLE: cis- and Enantio-selective cyclopropanation with chiral (ON+)Ru-salen complex as a catalyst
AUTHOR(S): Uchida, Tatsuya; Irie, Ryo; Katsuki, Tsutomu
CORPORATE SOURCE: Department of Molecular Chemistry, Graduate School of Science, Kyushu University 33, Fukuoka, 812-8581, Japan
SOURCE: Tetrahedron (2000), 56(22), 3501-3509
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:192919
GI



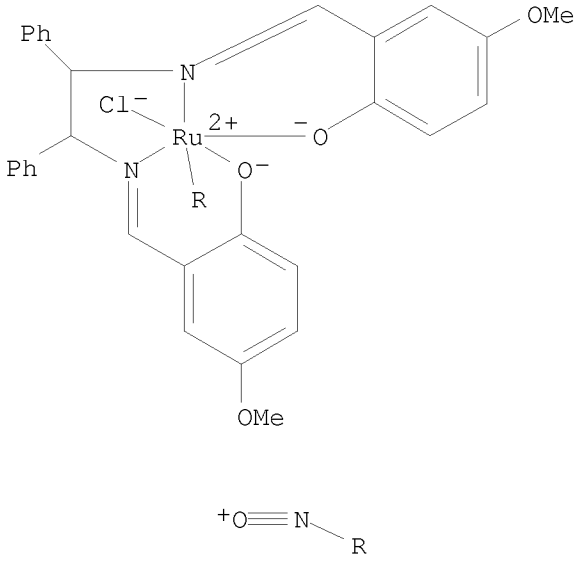

I

AB Cyclopropanation of styrene with α-diazoacetate in the presence of (R,R)-(salen)ruthenium complex I in THF which dissolves the complex exhibits remarkable cis- and enantio-selectivity [cis:trans = 97:3 > 97% ee (1S,2R)], while the same reaction in hexane which does not dissolve it shows good but opposite sense of enantioselectivity [-83% ee (1R,2S)] together with moderate cis-selectivity (cis:trans = 68:32). In homogeneous and heterogeneous conditions, (salen)ruthenium complexes are considered to have different ligand-conformation which, in turn, causes the opposite sense of enantioface selectivity in the cyclopropanation.

IT 244761-63-5P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(stereoselective prepn of arylcyclopropanes via cyclopropanation of arylalkenes with chiral (ON+)Ru-salen catalyst)

RN 244761-63-5 CAPLUS

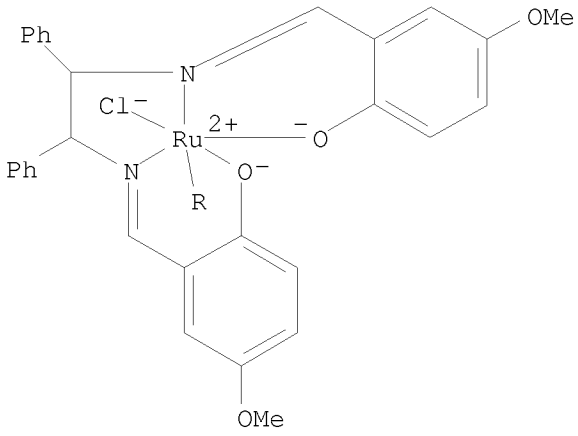
CN Ruthenium, chloro[[2,2'-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[4-methoxyphenolato-κO]](2-)]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)

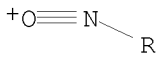



REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1999:444676 CAPLUS
DOCUMENT NUMBER: 131:257263
TITLE: Chiral (ON)Ru-salen-catalyzed cyclopropanation. High cis- and enantioselectivity
AUTHOR(S): Uchida, Tatsuya; Irie, Ryo; Katsuki, Tsutomu
CORPORATE SOURCE: Department Molecular Chemistry, Graduate School Science, Kyushu Univ., Fukuoka, 812, Japan
SOURCE: Synlett (1999), (7), 1163-1165
CODEN: SYNLES; ISSN: 0936-5214
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal

LANGUAGE: English
OTHER SOURCE(S): CASREACT 131:257263
AB A (R,R)-(nitrosyl)(salen)ruthenium(II) complex was found to be an effective catalyst for cis-selective asym. cyclopropanation (≤89% ee) which was performed under sunlight coming through a window or incandescent light. Furthermore, a (R,R)-(nitrosyl)(hydroxy)(salen)ruthenium(II) complex was also found to show good cis- and enantioselectivities (≤92% ee) in the reaction in the dark.
IT 244761-63-5
RL: CAT (Catalyst use); USES (Uses)
(salenruthenium-catalyzed asym. cyclopropanation)
RN 244761-63-5 CAPLUS
CN Ruthenium, chloro[[2,2'-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[4-methoxyphenolato-κO]](2-)]nitrosyl-, (OC-6-34)- (9CI) (CA INDEX NAME)



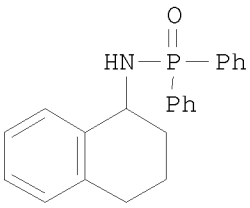

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1998:612059 CAPLUS
DOCUMENT NUMBER: 129:202750
ORIGINAL REFERENCE NO.: 129:41191a,41194a
TITLE: Process for producing optically active amines
INVENTOR(S): Mukaiyama, Teruaki; Sugi, Kiyoaki; Nagata, Takushi; Yamada, Toru
PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan
SOURCE: PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9839276 | A1 | 19980911 | WO 1998-JP938 | 19980306 |
| W: JP, US | | | | |
| RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| EP 901996 | A1 | 19990317 | EP 1998-905797 | 19980306 |
| EP 901996 | B1 | 20060201 | | |
| R: DE, FR, GB, IT, NL | | | | |
| JP 4004547 | B2 | 20071107 | JP 1998-537975 | 19980306 |
| US 6222072 | B1 | 20010424 | US 1998-186626 | 19981106 |
| PRIORITY APPLN. INFO.: | | | JP 1997-52061 A | 19970306 |
| | | | WO 1998-JP938 W | 19980306 |

OTHER SOURCE(S): CASREACT 129:202750; MARPAT 129:202750

GI



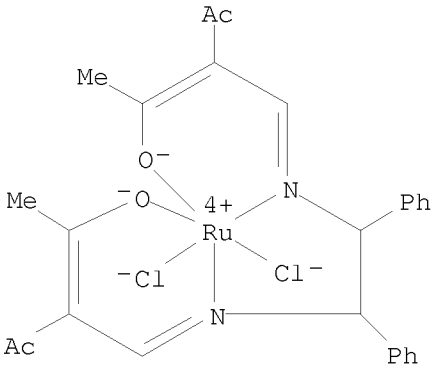
I

AB Characterized is a novel process for producing optically active amines useful as an intermediate for physiol. active compds. such as medicines and agricultural chems. or as a starting material for synthesizing functional materials, e.g., liquid crystals, fine chems., etc., which comprises the step of reacting an imine with a hydride reagent in the presence of an optically active metal compound and an alc. compound and/or carboxylic acid compound Thus, compound (I) (preparation given) was treated with HCl/MeOH to give 98% 1,2,3,4-tetrahydro-1-naphthylamine with 98% ee.

IT 212250-97-0
RL: CAT (Catalyst use); USES (Uses)
(process for producing optically active amines)

RN 212250-97-0 CAPLUS

CN Ruthenium, dichloro[[rel-3,3'-[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis[(nitrilo-κN)methylidyne]]bis[4-(hydroxy-κO)-3-penten-2-onato]](2-)]-, (OC-6-12)- (9CI) (CA INDEX NAME)



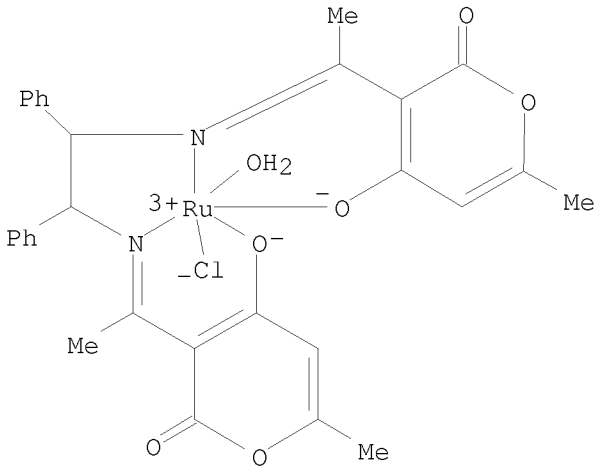

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1997:597503 CAPLUS
DOCUMENT NUMBER: 127:293068
ORIGINAL REFERENCE NO.: 127:57283a,57286a
TITLE: Chiral Ru(III) metal complex-catalyzed aerobic enantioselective epoxidation of styrene derivatives with co-oxidation of aldehyde
AUTHOR(S): Kureshy, R. I.; Khan, N. H.; Abdi, S. H. R.; Iyer, P.
CORPORATE SOURCE: Central Salt and Marine Chemicals Research Institute, Bhavnagar -, 364 002, India
SOURCE: Journal of Molecular Catalysis A: Chemical (1997), 124(2-3), 91-97
CODEN: JMCCF2; ISSN: 1381-1169
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:293068

AB Ru(III) chiral Schiff base complexes derived from dehydroacetic acid with 1S,2S-(+)-diaminocyclohexane, 1R,2R-(-)-1,2-diphenylethylenediamine and S-(+)-1,2-diaminopropane have been prepared The enantioselective epoxidn. of styrene and 4-chloro-, 4-nitro- and 4-methylstyrene was achieved by the combined use of mol. oxygen and sacrificial reductant isobutyraldehyde catalyzed by the above synthesized Ru(III) chiral Schiff base complexes. Good yields of the desired epoxides were obtained with styrene and 4-chlorostyrene by GLC. Enantiomeric excess of the epoxide was evaluated by 1H-NMR using chiral shift reagent Eu(hfc)3 and by chiral capillary column. The extent of enantioselectivity is shown in Hammett plots.

IT 197145-67-8P
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(chiral ruthenium complex-catalyzed aerobic enantioselective epoxidn. of styrene derivs. with co-oxidation of aldehyde)

RN 197145-67-8 CAPLUS
CN Ruthenium, aquachloro[[3,3'-[(1,2-diphenyl-1,2-ethanediyl)bis[(nitrilo-κN)ethylidyne]]bis[4-(hydroxy-κO)-6-methyl-2H-pyran-2-onato]](2-)]-, [OC-6-34-[S-(R*,R*)]]- (9CI) (CA INDEX NAME)

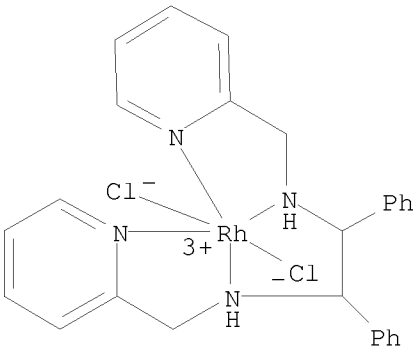



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1988:642931 CAPLUS
DOCUMENT NUMBER: 109:242931
ORIGINAL REFERENCE NO.: 109:39991a,39994a
TITLE: Chiral metal complexes. 26. Metal complexes of the new stereospecific tetraamine ligand 3R,4R- and 3S,4S-diphenyl-1,6-di(2-pyridyl)-2,5-diazahexane
AUTHOR(S): Fenton, Ronald R.; Vagg, Robert S.; Williams, Peter A.
CORPORATE SOURCE: Sch. Chem., Macquarie Univ., 2109, Australia
SOURCE: Inorganica Chimica Acta (1988), 148(1), 37-44
CODEN: ICHAA3; ISSN: 0020-1693
DOCUMENT TYPE: Journal
LANGUAGE: English
AB (RCH2NHCHPh)2 (R = 2-pyridyl) (picstien), based on stilbenediamine, was prepared in its racemic and enantiomeric forms. R,R-Picstien coordinates to Co(III) to give Λ-β-[Co(R,R-picstien)Cl2]X.H2O (X = Cl, ClO4) stereospecifically; the complexes were characterized by NMR and chiroptical properties. The chloride donors in this cation undergo substitution by NO2- or C2O42- with full retention of its Λ-β topol. A Rh(III) analog of the dichloro complex also was isolated, and this has the same stereochem. The S,S antipode of the ligand was used to generate corresponding enantiomeric chelate forms.
IT 117802-85-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and NMR and CD of)
RN 117802-85-4 CAPLUS
CN Rhodium(1+), dichloro[1,2-diphenyl-N,N'-bis(2-pyridinylmethyl)-1,2-ethanediamine-N,N',N'',N''']-, stereoisomer, perchlorate (9CI) (CA INDEX NAME)

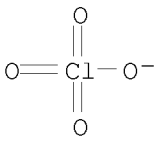
CM 1

CRN 117802-84-3
CMF C26 H26 Cl2 N4 Rh
CCI CCS



CM 2

CRN 14797-73-0
CMF Cl O4



=> log h

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 237.88 | 522.94 |

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| CA SUBSCRIBER PRICE | -34.44 | -35.26 |

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 17:42:44 ON 29 JUN 2009